

Aviation News

McGRAW-HILL PUBLISHING COMPANY, INC.

JANUARY 7, 1946



Convair's New Transport: Cutaway drawing of Consolidated Vultee's new Model 240, of which American Airlines has ordered 100 to cost \$18,000,000, shows 40-passenger seating arrangement. Using jet thrust from the exhaust of its two Pratt & Whitney R-2800's, the ship will cruise at 300 mph. and have a maximum speed of 350 mph. or above. Delivery is expected to start early in 1947. The planes will be used for flights up to 1,000 miles. (See Transport)

Private Flyers Swarm to Miami Air Maneuvers

Navy combat tactics and Army jet flights overshadow civilian competitions scheduled....Page 7

New CAR Part 03 Seen Setting Engine Standards

Sec. 0.4 of airworthiness requirements for personal planes hailed by CAA engineers....Page 13

Airline Equities Now Selling Above Book Values

Existing wide disparities probably will tend to narrow as industry matures.....Page 18

CAB Approval of IATA Agreement Due Tomorrow

Favorable decision expected to support carriers' position in forthcoming meeting.....Page 33



The power behind the HEADLINES

Look at the records for speed, range, load and fuel efficiency. One engine dominates, one engine makes possible the headlines. One engine has the sheer power, low weight and low fuel consumption to make possible these headlines. It is the Wright Cyclone 18.

Many of the headlines tell of records

with military planes—such as the Boeing B-29, Martin Mars, Consolidated B-32 or Boeing C-97. But now that the Cyclone 18 is fully available for commercial use in Lockheed Constellations and other transports, its power will make new records which will be reflected directly in earnings.

WRIGHT Aircraft Engines

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Wright Aeronautical Corporation, Paterson, New Jersey • A Division of Curtiss-Wright

THE AVIATION NEWS

Washington Observer



ARMY DOMINATION—Aviation people are keeping a weather eye onAAF ambitions to have a major finger in the transportation picture. AAF has pleaded heavily for cooperation with the air carrier industry, offering research and other facilities, but in plane design is going a way looks like. This is especially true after CAA Chairman Pogue blamed Gen. Arnold's bid for continuing authority over carriers in his Oklahoma City speech.

DISPERSAL—The end has not been based of the controversy over dispersal of aircraft plants. The AAF has not yielded, and neither is the industry ready to back down. The Los Angeles atomic bomb map, shown Congress recently, is a cogent argument, however, that it is going to require more than conversation to resolve.

GERMAN ENGINEERS—Many German aircraft engineers, called upon by Allied authorities after V-E Day for technical data, asked for transfer to the United States where they were willing to assist in the aviation program against the Japs. They were told by some, at least, that their scientific technique was not generally superior and not adaptable to U. S. industry. Nevertheless exceptions were made and several German engineers, especially in the jet field, who obviously had exclusive experience, were recommended for transfers. Whether they were brought over is not ascertainable.

SHOWDOWN—Efforts to break down resistance of the aircraft industry to participation in the Cleveland National Air Show failed, and the industry went on record with Gen. Arnold in an uncertain sense when the General said he'd been told the industry wasn't participating because of his wartime policy against such shows. They made it plain it was their own policy, and a sound one. It seems apparent that Cleveland show backers failed to consult the industry before announcing their plans, counting on persuasion and a long drought to bring in the displays. Fact is the plane makers have nothing ready to show, no personnel or excess funds to devote to a show aero.

* * *

AIRPORT PROGRAM—The projected airport building program may have many a benefit, not the least of which are losses by adjacent property owners who find the roar of motors and propellers and the flight of planes a depressive factor on property values. An appraiser's report shows that within a half-mile of a proposed airport location a loss of 75 percent in assessed valuation is imminent. From this it would appear that airport rights-of-way may be rather expensive.

* * *

GUARD AVIATION—Despite talk about National Guard air units, there are indications many units will not want to participate because the cost is high, and because air units won't have the tangible benefits of infantry and other ground forces.



New sketch shows details of the forthcoming DC-8 transport.



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News at Deadline

TWA Training School

TWA plans to begin training all operating personnel at its international division at a school at Reading, Pa., Municipal Airport, starting about Jan. 10. Previously conducted at Washington and other cities, the work will be consolidated into one unit at Reading.

Several hundred students, including pilots, co-pilots, flight engineers, navigators and radio operators, will be trained. L. P. Wink, who had charge of the Washington school, will direct the instruction C-54s and Convairs will be used. Courses for new personnel will extend eight to 10 weeks, and reorientation courses will be given at six-month intervals.

Airports in Surplus

Party-four airports and two port terminals which cost the Government more than \$5,000,000 each, have been or are likely to be declared surplus. The Surplus Property Administration has informed Congress that the total cost of these airports was \$30,000,000 and the port terminals \$15,000,000. SPA reported that no surplus transportation facilities other than these airports and port terminals were found to have cost \$5,000,000 separately. The unbalanced regional distribution of surplus airports creates a serious disposal problem. Because airports were constructed primarily for their military usefulness, it is necessary to make a study of the postwar needs of each locality to determine the extent to which airport facilities can be adapted to the needs of civilian communities. Design of airports at the same time, must be adjusted to the needs of the national defense system. SPA has asked the advisory services of the CAA in making this study.

Overseas Sales

November sales from overseas surplus of aircraft and aircraft parts, just reported by the FLC aircraft division, realized a total of \$3,206,813 on planes and equipment initially costing \$4,666,811. The divisional sale brought the cumulative sales through November to \$4,832,511, while the cumulative original cost of aircraft and parts sold from overseas surplus to \$10,380,884.

AVIATION NEWS • January 1, 1946

Industry Observer

Chicago Electric Manufacturing Co., owned of which has been purchased by E. L. Carl (AVIATION NEWS, Dec. 31), manufactures portable welding machines, electric fans, and a line of small devices which include ice cream freezers, juicers, a duster, waffle iron, toaster and sandwich grill. During the war the company made fans. Pre-war volume was about \$2,000,000.

Brigadier General Denny's Radioplane Co., Visalia, Calif., is continuing research and production of piloted aircraft, comprising several new types. Work on one included thousands of miniature target planes for Army and Navy. William Callan is president; Harold Powell is vice president, and Denny is secretary.

Special Devices Association, Inc., recently incorporated in New York, will not conduct commercial operations and has no members with the Special Devices Division of the Navy Bureau of Aeronautics, according to Washington officials, who describe it mainly as an "Army" association of the division. Navy officials are in the association's interest of keeping contact with the ranks of specialists who have gone back to civil life.

Navy has almost 250 24C turboprop (Westinghouse) engines on order. This type engine is specified for the new F9U Cougar and the new P2D.

The armed forces are continuing to earmark considerable numbers of aircraft engines, particularly those of the R-1830 series, for manufacture in line of overhead. This procedure is considered preferable to that of designating these engines as surplus.

Surplus property officials tell of H-1750 Fairchild and Liberator bomber engines, claimed scrap or surplus, being used as power pumps that are drawing water off the lowlands of Holland inundated by the Nazis.

Martin's military aircraft requirements for the powerful Pratt & Whitney R-4160 8-cylinder include those for the BTM, XPM and the JBM.

The originally declared surplus machinery and equipment at the Pratt & Whitney engine plant at Kansas City, Mo., is still available to purchasers despite the Navy's intention of obtaining title to the plane propellers, including the improvements, buildings, offices and leases. Navy acquisition of the plant depends upon passage of necessary legislation. Regardless of the passage of this legislation, however, the Remington-Pfleider Corp. has authority to dispose of the equipment and machinery originally declared surplus. The Navy has been encouraging disposal and transfer of machine tools adaptable to certain manufacture at a definite stage in spending recoveries of industry to normal production.

Pratt Aircraft (Canada) Ltd. has been formed by Pratt Aircraft Ltd., London, England, to manufacture and sell in Canada the Pratt Premier and a light twin engined freight line transport. A Canadian demonstrator of the Premier, with de Havilland Gipsy major and constant speed propeller, is to be assembled at Toronto in February. It will be adapted for use of gas or kerosene. The twin engined aircraft will have a speed of 170 mph with a range of 850 mi., and will cost between \$35,000 and \$35,000. First of these aircraft is expected to be ready in June for flight tests, to be made in Canada by Segugano. The new company is temporarily using part of the de Havilland Aircraft of Canada Ltd. plant at Toronto, and is expected to rent one of the government-owned buildings of the plant. John Connell has been named Canadian general manager of the Pratt Aircraft Ltd.

National Airlines' Lodestar flew from New Orleans to Jacksonville in one hour and 56 minutes recently, establishing a new commercial record between the two cities. Scheduled NAL flying time is two hours and 43 minutes.

North America's Twin Mustang is expected to be an early contender for cross-country sport flight honor. One who will fly three Lockheed P-80 jets on a record-breaking attempt may be the first to fly a series of 1946 dashes. Navy still is uncertain as regards to what P-80 is being produced at a southern California base. All flights will be made with a propeller for a strong tailwind.

INDUSTRIAL ORGANIZATIONS

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Aviation News

McGRAW-HILL PUBLISHING CO., INC.

January 7, 1946

Private Flyer Tourists Swarm to First Post-War Miami Air Show

Navy combat tactics and Army jet flights overshadow few civilian competitions scheduled on incomplete program.

The first nationally-promoted air show since war's end, the All-American Air Maneuvers, last week-end drew thousands of aviation enthusiasts to Navy-controlled International Airport, Miami, Fla., for a three-day demonstration.

Most striking part of the affair seemed to be the unusual lightplane fair to Florida, sponsored by lightplane manufacturers and the Gulf Oil Co. Nearly a thousand tourist planes had arrived in Miami as of Thursday morning, and hundreds more were expected.

With opening of the show only a few hours away, as this was written, the programs of competitive events still were incomplete. Virtually all contests were to be held with light or civil plane types. Flight training exhibition, during which a man and woman would be given flight instruction through solo, was planned for the three-day meet. Events were still being scheduled Thursday as competitors arrived.

Other features included displays of combat manufacturers and government formation flying by Navy and Marine fighter pilots, and exhibitions of jet and conventional-powered

fighters, helicopters and bombers. Were scheduled highlights of the military role of aviators at the show. Fifteen battle-tested carrier planes were to demonstrate the combat tactics of "The Navy's Flying Machine," while Naval Air Group 21, Marine Fighter Squadron 21, Marine Helicopter Squadron 202 were on the program in other exhibitions.

There appeared a question whether the lightplane tour group would reach its advance registration of more than 2,000 planes, due to bad flying conditions at some home airports in the north, and to aged condition of many of the remaining private planes in service, but a large representation was already assured.

Wilbur Shaw, three-times winner of the Indianapolis speedway auto race, and a veteran private pilot, was official starter for the racing events, while Col. Mike Murphy, former international aerobatic champion and first pilot to land a glider in the Normandy invasion, was one of the judges.

The racing events were to be

sanctioned by the National Aeromotive Association, a chapter of

FAI Sanction

Post-war resumption of national air meets, with the show at Miami last week, resulted in action by the Federation Aeronautique Internationale, world governing body of sporting aviation, still in force, requiring sanction of any such meet. The ruling edict for suspension of the FAI license of any person who "has been present at a meet" on an unsanctioned air meet, which would bar him from participation in any sanctioned event.

Sanctions for air meets in this country are issued by the National Aeromotive Association, as it is related in the story. FAI is empowered to name FAI licenses on the spot, if necessary, to non-license holders.

A revamping of meet and record rules is now in progress and NAA sanction fees likewise are being revised.

The new class covers off-trim, circles and record-holding.

which, the Greater Miami Airport Association, was a sponsor of the show. With NAA forces supervising conduct of the races, any outstanding performances would have the stamp of authenticity and could be put in as claims for national records. Official sanction was obtained by sponsors shortly before opening time.



READY FOR CONVERSION:

Lined up on a ramp at the Glenn L. Martin plant at Middle River, outside Baltimore, are a dozen of the more than 100 C-47s which the company is converting for commercial airline use. Martin has contracts totaling more than \$20,000,000 for conversion of these

ships for 16 airlines, including two South American lines. The company also is converting a number of C-47s for some of the airlines. Pennsylvania-Central has to get the first of the conversion jobs. Delivery at the rate of one per day is slated by mid-January.

Exhibitions of the new hangar-type projectiles scheduled included a high speed cargo drop from a Macchi fighter flying at more than 600 mph, and dropping a lightplane from the air by a large parachute.

Beverly (Ike) Howard, lightplane pilot and flyer, Sammy Mason and Woody Edmonson, were among specialty flyers on the program to entertain between racing events.

The Army's Lockheed P-30 Shooting Star, one of the fastest planes in the world, and the twin-engine P-59 Avenger, and a Sikorsky helicopter were to give flight demonstrations. Exhibited on the ground were a B-29 Boeing Superfortress, Douglas A-30 Invader, H-17 Boeing Flying Fortress, North American F-86 Sabre, and Republic P-47 Thunderbolt. Other Army ground displays included combat radar equipment, bomb search and bombing installations, and a B-50 mobile training unit for ground crews.

Carl Froehling, contest chairman, reported that virtually every major airplane manufacturer was represented at the meet, as well as a country-wide representation of makers of accessories, aviation fuel, and flight school and aircraft service operators.

Linus H. Walker Named Confidential Aide to Lee

A former member of the staff of AGC's General Counsel, Louis H. Walker, has been named confidential assistant to John Lee, Board member. Walker succeeds Jay Mead-

New Approach Indicator Developed

An approach angle indicator utilizing light beams through lenses has been developed at Washington University to assist in night landings and will be used for the first time on the first three crossovers at Idlewild Airport, New York City.

Two units are placed at each end of a runway and project light at an angle toward the approach. When the plane is above the proper angle of approach, a green middle beam is the correct approach, and a red bottom beam warns of a too-low angle.

» **British Development** — Reported

that, who resigned recently to join the Permanent International Civil Aviation Organization where he is now acting as assistant secretary of ICAO's Air Transport Bureau.

Prior to joining CAB in October, 1944, Walker spent slightly over a year as a student in CAA's war training service program, obtaining a commercial pilot's license, and an instructor's rating. He then attended AAP's Commercial Flying School at Spokane and Brookfield, Tex., receiving an Army primary flying instructor's certificate which he later used as an instructor at the Army's Primary Contract School at Ryan Field, Tucson, Ariz.

A graduate of Whitman College and University of Washington Law School, Walker once served as assistant law librarian of the Washington State Supreme Court and

is to be an adjutant of a system developed by the British during the war.

The Washington indicator employs filters to attain the three colored beams. In that respect it differs from the CAA experimental approach indicator built earlier in which the middle beam was obtained by synchronizing the top green beam with the bottom red beam.

The Washington device also uses the three colors set up as standard during the war. The colors in the CAA indicator can not be altered and for that reason it is not expected that the indicator will be installed at airports.

Specified at his home town of Ellensburg, Wash.

» **Other Changes** — Recent changes in CAB's Office of Trial Examiners bring to 30 its total membership. Herbert C. Bryan and Ralph W. Water have been removed from the list. Bryan, formerly with CAB for three years prior to entering the service, died at Trelease, Jr., has left his position as examiner and returned to teaching duties at the University of Wyoming, from which he has been on leave of absence. Return of at least two more examiners is anticipated.

AiResearch Holds Contracts Exceeding \$4,000,000

Airframe Manufacturing Co. of Los Angeles has received contracts in excess of \$4,000,000, for cabin supercharging and air conditioning equipment to be installed in the Lockheed Constellation.

Outstanding among this equipment is the company's "Tornado" in the company's "Tornado" is a "Teapot," a lightweight midjet air expansion refrigeration turbine of high performance for aircraft air conditioning. Units now in order from AiResearch range from one-half the size of a Teapot's fan to one approximately 10 ft. in diameter. The smallest, weighing only 3 lbs., is said to create a 190-degree temperature drop at the 7-ft. throw per minute.

The "Tornado in a Teapot," resulted of nearly five years engineering development, introduces a new development in lubrication for control of friction at extreme speeds, and the perfection of high precision manufacturing techniques. The turbine rotor revolves 100,000 rpm per minute and operates at velocities as high as 600 mph.

Esso Takes Lead in Campaign To Bolster Aircraft Servicing

Advocates of wider use of personal planes worried over high rate of service operator failures, fear hindrance to private flying unless trend is checked.

Warning because the record of aircraft service operators has shown a high rate of business failures, advocates of wider use of personal aircraft are studying carefully the problems of the business.

Their concern has chiefly in the belief that private flying cannot flourish without a strong servicing system. An increased number of airports is not sufficient in itself, the thinking runs. Operators in the fields must have modern equipment, give high-type service, and yet prosper.

» **Campaign** — One of the leaders in the campaign to strengthen the aircraft service operator's position is the Standard Oil Co. of New Jersey, which has made their aviation products dealers in 34 states. Ralph C. Oertel, manager of the aviation sales division, especially emphasizes the operator's difficulties in obtaining financing, which he sees as one of the most critical aspects of the aircraft servicing picture.

He points out that public funds for airport construction will not be used for hangars, shop equipment, restaurant and other facilities, all of which are necessary properly to serve the private flyer. On the other hand, landing agencies do not finance airport operators. Oertel suggests that the operator's suppliers might alleviate this situation by extending long-term credit.

» **Report** — While not confirmed by company officials, there are seemingly reliable reports that Standard has granted that kind of aid and in one instance, at least, has made a straight loan to a new operator. For the most part, the company's assistance is promotional and educational. Currently, Standard is offering a cooperative advertising campaign to dealers, under which the company assumes the greatest proportion of the cost of a dealer's local advertising.

Standard's aviation credit card is believed to be unique. Distributed through dealers, it enables the holder to charge to his account not only gas and oil, but accessories, hangar storage, repairs, landing charges or any other bill incurred with a dealer.

» **Service Aids** — To aid operators in providing better service, Standard claims to have organized information charts explaining the type of oil or grease used as every mechanical part of an aircraft. A special slide film, "It's Good Business at Your Airport" is being shown to operators to give helpful hints on other phases of serving the public. Esso salesmen have instructions to stress accurate bookkeeping to operators, and furnish information on bookkeeping services available.

Barr Named Chairman of AIA Export Committee

J. M. Barr, export manager for United Aircraft Corp., has been named chairman of the Aircraft Industry Association Export Committee. Robert Kinkaid, Washington representative for Boeing, is vice-chairman. Barr succeeds Irving H. Taylor, of Douglas.

New members of the committee include W. D. St. John, sales manager of Piper Aircraft Corp. and K. S. Lindsey, sales manager of The B. G. Corp. Twenty companies are represented on the committee.

McCarran Seeking Full Transport Data

With the explanation that "no government agency has as broad, or is currently gathering, anything approaching adequate transportation statistics," Sen. Pat McCarran (D., Nev.) has introduced legislation directing the Comair Bureau to complete complete statistics on air, highway, and waterway transportation. Real statistics were eliminated from the proposed study, since these are now being adequately compiled by the Interstate Commerce Commission.

» **Need** — "There is no need to argue that the problems involved in setting up the true public interest is preserved in our national transportation policy see both complex and serious," McCarran commented. "The solution of these problems is going to require a lot of straight, hard thinking."

"To be realistic, this thinking must be based on the most adequate body of factual data which it is possible for the Congress and the executive branch of the government to assemble."

For example, McCarran suggested, there should be data available as to the relative use which transportation makes in different kinds of trades, in highway, waterways, and air transportation facilities, in assembling of materials and in the discharge of products.

McCarran's bill is pending before the Senate Commerce Committee, of which he is a member.



INSTANTANEOUS ACCESSIBILITY:

Only two manuscripts are required to open the seal on the Constellation's 2,500-lb. Wright motor for inspection. Standard equipment of oil Constellations, the new arrangement has no supporting members forced by the jettison to interfere with work, Lockheed says.



CANADIAN TUDOR PLANT

Rose of A. V. Roe (Canada), Ltd., at Toronto's Malton Airport, where the Canadian subsidiary of the British firm is to build military aircraft and is expected to produce the Tudor transport. Lancaster and Lincoln bombers were built on the government-contracted plant during the war.



Experimental Engine and Plane: The McDonnell Aircraft Corp.'s experimental fighter, the XP-87, was powered by the 2,300-hp liquid-cooled engine of Continental Aviation & Engineering Corp. The engine developed high power at an exceptionally low pound-per-horsepower ratio.

Experimental Engine Sets New Records

Continental Hyper produced 1.5 hp per cubic inch of displacement and weighed only .78 lbs per horsepower.

A high-powered, liquid-cooled engine that passed many engineering developments that were incorporated in other power plants was built during the war by Continental Aviation & Engineering Corp.; it has been revealed with the lifting of security restrictions.

While only 23 of the 2,300-hp, I-430 Hyper engines were developed, unique features were put into many of other manufacturers which were being produced in volume and had greater power. That engine was adopted, rather than the construction of a new factory and retiming to mass produce a new engine of higher horsepower.

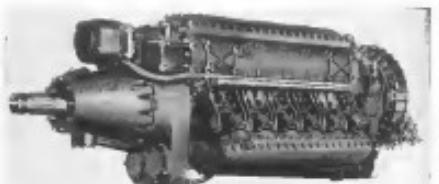
Fight Tested.—The Hyper was flight tested in the Lockheed XP-49,

and the McDonnell XP-87.

The McDonnell aircraft class three world record for power—an engine of 1.5 hp per cubic inch of displacement, a weight of 76 lbs per hp, and a 22-in. diameter. A 12-cylinder, inverted V-type, the Hyper weighs 1,845 lbs. It was developed especially for use with a turbo-supercharger.

High Output.—Among the pioneering features in the Hyper was the exploitation of high brake horsepower per cubic inch displacement. Continental declares, "the engine project's success clearly demonstrated that reliable engines could be built for maximum pressures of 1,800 lbs per square inch, compared with approximately 800 lbs per square inch for diesels."

After the Hyper was first run in August, 1944, its performance on it was made available to other manufacturers. This is reported to have resulted in fundamental improvements in nearly all liquid-cooled engines both in this country and in Great Britain.



Pioneer Engine: This 2,300-hp liquid-cooled engine developed by Continental Aviation & Engineering Corp., during the war had such a low ratio of power output to weight that its outstanding features were adopted in the liquid-cooled engines of other manufacturers.

Radford Named Aide On Service Merger

Appointment to make committee is viewed as shrewd Navy move to protect an aviation branch.

Selecton of Rear Admiral Arthur Radford to be the Navy's representative on a special task committee to assist the Senate Military Affairs Committee in drafting a bill for a single department of defense is seen as a shrewd and important move by the Navy to protect its aviation in Congressional action on unification.

Admiral Radford, a ranking officer in the Bureau of Aeronautics and deputy chief of naval operations (air), at a hearing before the Air Transport Association was announced last week along with plans for expansion of the association's work and emphasis on all-weather flying studies.

New man is Brig. Gen. Milton W. Arnold, acting chief of staff of the Air Transport Command, who will be step up to that job later this month. He was chosen for his knowledge of flight-weather performance throughout the war. Members of his board were with the fleet, aboard carriers during all crucial operations and their reports were credited with making naval aviation so flexible.

Protection.—Admiral Radford's record and well-known views on aviation are expected to win the respect of the committee. At the same time, because of his strong Navy viewpoint, his presence will have a tendency to protect the independence and integrity of naval aviation in a specialized branch.

His appointment was the second important office recognition of personnel from the Navy. Previously, Vice Admiral John T. Towers, former naval aviator, was named executive director of the Pacific Fleet and Pacific Ocean areas.

He succeeds Admiral Raymond A. Spruance who was appointed president of the Naval War College at Newport, R. I.

Another top fleet assignment went to a veteran naval aviator when Vice Admiral Marc A. Mitscher, whom Radford succeeded as DCNO (air), was assigned to command the Eighth Fleet.

Wilson to Speak

Eugene E. Wilson, vice-chairman of United Aircraft Corp. and chairman of the board of governors of the Aircraft Industries Association, was scheduled to address the National Agricultural Cooperative Transportation Committee at a luncheon in Chicago today. He will speak on "The Two A's"—Agriculture and Aviation."

Brig. Gen. Arnold Takes ATA Position

Acting chief of staff of ATA to be vice president of operations and engineering.

An addition to top personnel of the Air Transport Association was announced last week along with plans for expansion of the association's work and emphasis on all-weather flying studies.

New man is Brig. Gen. Milton W. Arnold, acting chief of staff of the Air Transport Command, who will be step up to that job later this month. He was chosen for his knowledge of flight-weather performance throughout the war.

Members of his board were with the fleet, aboard carriers during all crucial operations and their reports were credited with making naval aviation so flexible.

Stress will be placed on study of commercial application of radar and other war-developed electronic devices. Another will direct the ATA's work with the assistance of John Gosselin, director of operations, and A. W. Dallas, director of engineering. Four experts are to be added to the operations staff to work with air traffic control and other problems.

ATA proposes to use an aeronautical radio laboratory at Mineola, Long Island, for its traffic control studies.

Also planned is a conference of airline specialists on engineering and maintenance problems, with subcommittees on aircraft requirements, equipment standardization, cargo handling, tools, servicing, and domestic and international air regulations.

UAL Broadens Air Freight Service

System-wide plan begins next month; other changes reported to CAB.

United Air Lines will manage a system-wide air freight service, Feb. 1. Rates, based on minimum shipments of 25 lbs., will run as low as 27 cents a pound. On shipments of 3,000 lbs. from coast to coast Douglas DC-3 Caravans will be used pending study of C-54's and new types designed chiefly for cargo.

UAL last week began service into Detroit with two daily westbound flights to Chicago and Pacific coast cities and two eastbound transcontinental flights. Non-stop service between Detroit and Philadelphia and between Detroit and Alameda, Calif., a projected West Coast service, will begin in April. UAL also has been reported to work the addition of two round trips daily between Portland and Seattle and three daily between Los Angeles and San Francisco.

Other Changes.—Other service changes reported to CAB:

Eastern.—Started service at Huntsville, Ala., and Brunswick, Ga., effective Jan. 1 and 5, respectively.

Inland.—Added one round trip daily between Beaver and Cheyenne and between Cheyenne and Durango, effective Jan. 1.

Western.—Added one round trip daily between Salt Lake City and Pocatello and between Los Angeles and San Francisco, effective Jan. 1.

Strategic Deliveries To Start Late This Year

Wilson M. Alter, president of Boeing, has announced that deliveries of the Model 377 Stratocruiser, commercial version of the B-39 Superfortress, will start the latter part of this year.

Alter and Boeing also has been involved in smaller transports in the design stage, but gave no details.

Production of the Model 377 and also parts for the B-39 is scheduled to begin next month.



ARMY GLIDE BOMB:

Described by the AAP as a "precision glide bomb," this 1,000-lb. bomb equipped with wing and tail surfaces carries a battery in the compartment aft of the wing and has adjustable control surfaces. It is designated the QB-1.

C-W Seen Stressing Guided Missiles

Guided missile—jetison aircraft—may be one of the principal post-war activities of Curtiss-Wright Corp., one of the industry's biggest aeronautical producers.

Development of guided missiles is reported as spectacular in the company's wind tunnel and laboratory at Buffalo which recently was presented to Cornell University (See Production) as a gift to be used for joint development work among eastern aircraft manufacturers. Projections are for some substantial production orders for this type of weapon.

Gas Turbine.—Another new Curtiss-Wright product is its gas turbine engine which may be ready for test flights late this year or early in 1947.

The company emerged from its record war business with approximately \$18,000,000 in set-aside contracts. Termination of contracts, most of them on a fixed fee basis, has been rapid. Deliveries in 1945 were approximately \$1,800,000,000 and in 1944 \$1,700,000,000. The company is not saddled with plant expansion since it used government-owned facilities in its expansion for war work.

Navy Scoop.—Most promising production military plane appears to be the Navy seafar, the SC-3. Biggest commercial business appears to be production of engines.

New Synthetic Oils Described to SAE

Advantages, outlined at Detroit meeting, include better performance in cold weather operation.

New synthetic lubricants which contain no petroleum oil, but which have some advantages over natural oils were reported in the Society of Automotive Engineers meeting today in Detroit.

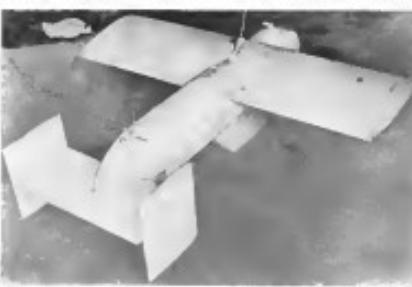
Developed by research extending over 25 years in laboratories of the Mellon Institute of Industrial Research, and of Laddo-Arco Products Co., National Carbon Co., and Carbide and Carbon Chemicals Corp., one of the new lubricants is miscible with water and soluble in organic solvents.

The other, soluble in water, can be used as brake fluid, a cutting oil, or for lubricating rubber or metal.

While more expensive than petroleum oils, the engine lubricant is test-samples shows better performance in cold weather for starting and operation, and greater freedom from sludge.

Atomic Power — Utilization of atomic power in jet-propelled planes and in rockets was predicted by Dr. John R. Dunning, of Columbia University. Current limits to such applications are heat transfer problems and the temperature properties of available alloys.

Although admitting that prophecy is dangerous, Dr. Dunning declared it unlikely that atomic power ever will replace conventional fuel in mass applications. Common concept of the cost of atomic fuel will



TELEVISION CONTROL

Designated the GB-4, this is a radio-television controlled glide bomb developed by the Army.

Martin Gives \$800,000 More for School

A gift of \$800,000 has been made to the University of Maryland by Glenn L. Martin for developing an aeronautical engineering college.

This is the second gift made to the University by Mr. Martin. His previous contribution, \$1,700,000, for the purpose, was used to bring the state appropriated \$193,000 in bring the total to \$2,286,000.

Developed by research extending over 25 years in laboratories of the Mellon Institute of Industrial Research, and of Laddo-Arco Products Co., National Carbon Co., and Carbide and Carbon Chemicals Corp., one of the new lubricants is miscible with water and soluble in organic solvents.

research and aeronautical engineering activities before May 1.

Program — Mr. Martin said he hoped to help create "an educational and research organization in aeronautical engineering that would be termed 'the jewel to industry' and at the same time be of lasting value to humanity."

The new college will be known as the Glenn L. Martin College of Engineering and Aeronautical Sciences. Plans call for the use of \$1,200,000 for plant and facilities and \$1,000,000 for research.

have to be revised on the basis of Dr. Dunning's paper, as he stated that cheaper methods of producing U-235 are in sight.

Auto Propulsion — What the aircraft industry can contribute from a construction standpoint to the automotive industry was returned to the engineers by Mr. Short of Lockheed Aircraft Corp., and W. E. Miller, consulting engineer, of Burbank, Calif. The suggested better use of metals, and replacement of lighter metals. The opinion was expressed that the auto manufacturers' practice of mounting a heavy body on a heavy chassis is not efficient utilization of materials and structures.

Canadian Synthetic Sales Exceed \$2,000,000

Canadian War Assets Corp., surgical disposal agency, sold more than \$2,000,000 worth of aircraft and components in the first eight months of fiscal year 1948-49. Aircraft sales totalled \$947,570; engines, \$66,845; aircraft components, \$259,112; aircraft instruments, \$34,823; raw materials, \$717,390, and engine components, \$57,937.

The disposal corporation has also announced it is placing on sale the government-owned plant at Vancouver leased during the war by Boeing Aircraft. The plant covers two acres and the main building contains 33,468 sq ft.

AVIATION CALENDAR

- Jan. 4—U.S.A. Rock Islands route conference.
Jan. 5—Standard Aeronautic Meeting, Rockford, Ill.
Jan. 11-14—Standard (1948) Aircraft Show, New York, N.Y.
Jan. 12-14—Aero-Products Division Planning Conference, Rockford, Ill.
Jan. 12-14—National Association of Broadcasters, Hotel New Yorker, New York, N.Y.
Jan. 12-14—Annual Meeting, International Business and Financial Relations Institute, Columbia University, New York, N.Y.
Feb. 11-12—Europe, New Conference.
Feb. 21-24—ATA March and Rate Conference.
Feb. 28-March 4—Transwest Aviation Engineering and Maintenance Conference, Phoenix, Ariz.
March 14-15—Pan American Aircraft Exposition, New York, N.Y.
April 1-2—Aero-Products Division Meeting, Hotel New Yorker, New York.

PRIVATE FLYING

New CAR Part 03 Held First Effort To Set Up Full Engine Requirements

Sec. 0.4 of airworthiness requirements for personal planes held by CAA engineers; industry reported to have agreed to most provisions after conference.

In the opinion of CAA engineers, 38 pages of regulations governing the powerplants of personal airplanes, part of the new CAR Part 03, (airworthiness requirements for personal planes), form the first attempt to set up comprehensive powerplant requirements for the personal airplane.

Industry engineers who at first protested the requirements are said to have given approval later to most provisions relating to powerplants, in conferences before the section was finally submitted to the Civil Aeronautics Board for final study and adoption.

Carry-over — Contained in Section 0.4 of Part 03, the powerplant regulations set up requirements for propellers, fuel and oil systems, tanks, pumps, valves, lines, fittings, radiators, cooling fans, hydraulics, de-icing and anti-icing, exhaust systems, manifolds, heat exchangers, fire walls and cooling as well as controls and accessories.

Except for minor changes and elimination of some repetition, the final powerplant section stands very much the same as the first proposal of CAA. Industry engineers are understood to be reserving comments on it, and as Part 03 general-

ly, until they have a longer time to work under its provisions and determine how they affect the manufacture of personal planes.

Other Provisions — Other principal provisions of Part 03 include:

• Revision of stalling speed requirements to limit maximum allowable stalling speed to 70 mph for single-engine aircraft, and for twin-engine aircraft of 6,000 lbs. or less, gross weight which fail to meet single-engine climb requirements.

• Provision that multi-engine aircraft of above 6,000 lbs. gross weight must have a rate of climb with one engine out of at least 1,000 fpm, determined by the plane's stalling speed in normal landing condition, using wear flaps if the plane has them, at the height of 3,000 ft, with cow flaps set for cooling on a hot day.

• Provision that angle of climb must be at least one to 12 and rate of climb must be at least 300 fpm.

• Requirement of the following limit load factors for various non-transport planes. Non-spinable, .35; nominal, .35; utility, .44; acrobatic, .4.

It is significant that the regulations do not require a stall speed limit for twin-engine planes of over



"Skymasters" Leave Plant: Twelve new Skymasters, Commonwealth Aircraft's new post-war nine-place side-by-side personal plane, were delivered recently

to distributors at the Kansas City Fairfax Airport. It was the first delivery of the new planes which have been type certified by CAA.

Swift Approved

Globe Aircraft's all-metal "Wingspan Swift," last week received its type certificate from CAA. The all-metal plane was a development of the pre-war experimental Globe Swift GCA-1 which used a plywood wing in combination with all-metal fuselage. The manufacturer reports that the all-metal craft is believed to be the first post-war designed personal airplane to receive its NC.

6,000 lbs. which can meet the rate of climb requirement with one engine out. For example, a twin-engine plane with 70-mpg stall speed would have a required rate of climb of 38 fpm, with one engine out. But the plane could have a stall speed of 85 or 90 or 100 mph, or even more, provided it had correspondingly higher rate of climb with one engine out.

Skyranger Approved, 12 Are Delivered

Two months after the first test flight of the first Commonwealth Aircraft "Skyranger," the plane has received its CAA approved type certificate, and 12 of them have been delivered to distributors, the company announced last week at Kansas City.

The two-place high-wing monoplane is selling at \$5,350 complete with starter, generator and battery. Production is expected to reach 100 a month within a few weeks, with further production increases scheduled as more materials and parts become available.

Banking — Commonwealth has a



"Skymaster" Gets NC. Equipped with interior cabin fittings designed to appeal to the women pilot, the new Commonwealth Skymaster has just received its approved type certificate. Production is expected to reach 200 in January.

bucking of more than 3,400 orders with cash deposits for the Skymaster and the three-place twin-engine Tri-motor amphibian, which is due to go into production soon.

The Skymaster is described as having a 162-mph. cruising speed, 115-mph. top speed, and it is said to be "unusually" stable in flight. Use of slots in the wings makes the plane virtually non-spiraling, the manufacturer says.

Flyaway—Dorothyann, who flew away the first 17 days from the plane, is now being courted by a Gill-Dove Field, between Marion and Union City, Tenn. The field is owned and operated by Gill Steelcap, who provided flight training for more than 2,000 persons since its opening in 1939.

A dining room with seating capacity for 300 is now being completed, while Steelcap also plans to have a large dance pavilion on the field. There will be three nights a week. The field was originally purchased by Steelcap for operation as a "dude ranch" but when he became interested in private flying, he converted it to a private flying airport.

Hopewell, Va., Organization Plans \$100,000 Airport.

A modern airport, costing more than \$300,000, and capable of handling commercial planes and seaplanes, will be built at Hopewell, Va., by Hummel Aviation, Inc., Fred H. Hummel, president, announced. It is expected the project will be completed by April 1.

Hummel says his plan is to make the airport one of the best of its type in the country. Other features in the complex, Dorsey S. Shultz, vice president, Morris H. Harrel, armament-treasurer, and M. P. Haasen, operations manager, plan call for four runways, an administration building, shop, private hangars and a seaplane hangar.

Culver's Simplify Control Explained

More detailed information about the Simplify control on the Culver Model V two-place personal plane is revealed in a recent report on the control system by Al Mooney, Culver vice-president in charge of engineering.

The slotted flap used extends over 70 percent of the wingspan, extending across under the fuselage and has the effect of straightening out the airflow at the points where the wings join the fuselage. The flap, Mooney reports, has an optimum setting for any desired flight condition, instead of just two settings which has been all the ordinary high-lift flap has provided—"up" and "down."

Up Position—As previously reported, the plane is limited to the best altitude for any phase of flight, by setting a flight control dial in the cockpit, which operates the flap and simultaneously moves the stabilizer. The combination of the two surfaces results in the degree of longitudinal control required for any desired flight attitude.

For example, the "approach" setting turns the plane for "the flattest possible glide for the greatest distance at a speed of about 15 mph with gear up," Mooney reports. "It is not necessary to flare the plane as you land, although a good pilot probably will, as the landing will be a little smoother."

Elevator—The elevator is reduced in size, in comparison with the stabilizer, and will only moderately change the attitude of the airplane, becoming a stabilizing factor when lifting each seat.

Power is not a determining factor as far as speed is concerned on the Model V, Mooney reports, but merely determines whether the plane goes up or down. Speed is governed primarily by the flight control dial settings.

Simplify—Substantially the plane is a two-control plane in the air, flown by wheel alone, but the rudder is provided for additional control in cross-wind takeoffs and landings. The airplane can be stopped "immediately," he reports. Approach and landing speed is about 14 mph, and the control dial may be set for this speed with power or without power. The plane has more stability at low speed than at high speed, the engineer adds.

The control system is a result of the company's development of military radio-controlled target planes

Los Angeles Airport Hearing This Week May Set Precedent

Belligerent minority of property owners, opposing new fields, strong political pressure, makes adoption of master plan unlikely in its present form.

The Los Angeles County Board of Supervisors begins this week on proposed adoption of a revised master airport plan seeking approval for 20 existing airports and 36 proposed terminals, airfields and emergency fields, within the county, probably will set as important precedent for other communities throughout the nation.

Adoption of the plan as presented will mean the county is agreeing to protect a "belittled" minority of property owners who have made it clear they want no airports in their local areas. Opposition is based on the noise-induced loss of low-intensity unrefined plants in residential areas, disturbance to birds and flocks of adjacent districts and chickens in ranches and the menace of crash landings. Strong political pressure makes outlook for adoption of the plan not bright.

Problems—Peculiar to Los Angeles County, with its population of close to 3,000,000, is the opposition of "old residents." These are the heirs and owners of small citrus and livestock ranches who have settled in the area in semi-retirement to round out their lives in the slow-paced tranquility offered by charms of commerce.

Somewhat belatedly the aviation industry, airplane owners, aviation associations, and airport planners of Los Angeles County have been aroused to the fact that planning for future airports is not enough. The "old residents" must be mollified.

They have begun talking to people, to support opponents and politicians, but possibly too late to exert immediate influence for the Master Plan.

Arguments—They are pointing out to County Supervisors and members of planning commissions that an airplane which made a forced landing in the street of a subdivision, and which might have struck a house or killed children, had no respect to which the pilot could have fled in the emergency.

They are nothing but property value statistics to show that property surrounding existing airports, large and small, has not depreciated but actually has tended to increase.

trial areas, and by the ear-splitting engine and propeller noise.

Air Garage Ready—There is indication the organized aviation groups will be instrumental in seeking local government relining of irresponsible flying, and the adoption of ordinances requiring the staffing of experts.

Presentation by the National Aeromodel Association's Southern California Chapter of petitions bearing signatures of thousands of property owners urging adoption of the Master Plan is scheduled for the hearing.

Also, as an indication of the trend of airport planning, the Los Angeles Supervisors will have for consideration sketches of a variety of proposed private airfields and airports which are intended to substitute for yesterday's "eyebrow" airfields attractive as well as utilitarian bases for pleasure and commercial flying.

Advisory Committee To Meet Jan. 23-24

First 1946 meeting of the CAA Non-scheduled Flying Advisory Committee, Jan. 23-24 in Washington, will introduce the committee's new executive secretary, Henry Lloyd Childs, former Curtiss-Wright test pilot, and will call for consideration of its agenda, including studies of the accident rate, further needed revision of Civil Air Regulations, civilian pilot training, radio equipment for private pilots, and success of the demonstrations of flight examiners and inspectors to augment the small staff of CAA-employed inspectors.

Arthur Bonham, Des Moines, chairman of the committee, will preside, and W. L. Jack Nelson, former executive secretary, now president of Service Aviation Corp., Washington, D. C., will sit with the committee in ex-officio capacity.

Childs, one of the country's best-known test pilots, resigned as manager of Curtiss-Wright Corp. flight test division, in '41 to a vacancy left by resignation in October of Nelson.

Long Career—Childs was born in Philadelphia in May, 1904, and has a Mechanical Engineers degree from the University of Pennsylvania. He has been connected with the Curtiss organization since 1933, first at Gardiner, Maine, as project engineer on several early personal plane developments, and later as chief engineer of the Curtiss-Robertson Corp. at St. Louis.



CAA MEN GET MEDALS:

British Empire Medals, Captain Duran, have been awarded by the Canadian Government to CAA vice-chairs Charles R. Marchand, Lorne E. Sanders and Jack R. Bassett, for gallant service in rescue of the crew of a crashed RCAF bomber at Montebello, in September, 1945. Awarded in Ottawa, the medals were accepted by T. P. Wright, Civil Aviation Administrator (left), from L. B. Ferrers, Canadian Ambassador to the U. S. (center). They are shown with Thomas A. Stone, Counsellor of the Canadian Embassy. Sanders and Marchand are still with CAA, both retired at Ketchikan, Alaska. Bassett is as director with CAA.

When the Curtiss-Wright Corp was formed in 1931 Childs was named chief of design, and five years later was named chief of flight test. In 1946 he held an unofficial world's speed record for a 560 mph. dive in a Curtiss fighter.

While Childs' experience in recent years has been mainly with high performance aircraft, his early experiences in design of powered aircraft, and his long association with the aircraft industry are regarded as very useful qualifications in his new post.

Lockheed Pusher Passes First Test

Lockheed's model 34 experimental two-seater pusher-type lightplane, which may become the company's first small commercial personal aircraft, has successfully and smoothly Dec. 29.

The plane is powered by an experimental 160-hp Continental four-cylinder engine, designated XC-108 by the manufacturer. Flight testing performance experiments were advanced by making the first flight at the Army's Patuxent Airbase on the Mojave Desert. Pilot was Prentiss Clavens, chief pilot of Mac Sherrill's special projects division of Lockheed, which also developed the single-place model 32 Little Dipper. Observers were jubilant over results.

Lockheed officials have given no indication that at this date a decision has been reached to attempt commercial production of the plane. It is understood that patents on the design will be taken out under the names of Robert E. Gross, Lockheed president, and Robert Beedy, project engineer.

Lockheed will continue demonstration flights of the Little Dipper, built in less than four months in 1944.

1,000th Private Plane Registered in Michigan

Michigan Department of Aeronautics reports registration of the 1,000th non-military airplane in the state. Registration fees, based on net empty weight of the plane, average about \$5.50, payment of which exempts the owner from personal property tax payments on the plane to counties and municipalities. While no arrests for non-registration have been made, the department is placing warning tags on a few planes which have not yet been registered.

Alexander McSorley

Briefing For Private Flying

A natural expenditure of \$1,000,000,000 per year within 10 years for private flying is a conservative estimate, if the manufacturing, sales and service organizations of industry make sufficient investments to do intelligent planning to develop the market. John H. Gossen, consultant to CAA Administrator T. P. Wright, and personal flying analysts, forecasts. Gossen says that the general pattern in marketing personal planes thus far has been one of gradual limitation of expenditures to stay within income, a method which never has been very successful in developing other volume markets. He calls for more attention to design of planes for easy operation and safety, additional and more convenient airports; more attention to convenience and desires of the private pilot and the consumer, and more aggressive merchandising.

FLIGHT TRAINING OFF?—Despite a CAA report of 70,000 student pilot certificates for 1943, the largest number ever issued, a plane manufacturer representative who has just completed a swing around the country visiting dealers, reports his observation that student flight training is down about 25 percent below wartime levels, having dropped off sharply soon after VJ-day. The drop, coupled with a decrease in repair and overhaul occasioned by the issuance of the first new planes since 1941, is causing some severe re-arrangement among many of the operators who are anxiously waiting new planes to sell in order to get back on a profit-making basis. Part of the slack in training is natural, much of it may be attributed to the transition between Johns and the general usage in the country in the immediate post-war period. It is a transition that must be recognized, however, by the industry. Many student pilots consider flight training as something they can get along without, if need be. Until the industry does the things John Gossen is talking about for the private flier, private flying doesn't have utility, and still is for the average American, only a hobby.

NATIONAL SOARING CONTEST—Officers of the Soaring Society of America are receiving a number of bids from various cities in the East, Midwest and Rocky Mountain areas for the first post-war National Soaring Contest, to be held sometime next summer. The competition is expected to attract the largest number of competitors in its history, due to heightened interest in soaring as a result of the war. Time and place of the contest will be determined within a few months, when all the bids are in, at the society's Elmira, N. Y., headquarters.

REVISED SPECIFICATIONS—Specifications for the new Fairchild F-24, which is being built by Bellanca Aircraft Engineering & Manufacturing Co., and the Fairchild general plane division, vary in some details from the original F-24, particularly as to length, height and gross weight. The Bellanca-built F-24 is 25 ft. 10½ inches long, as against a 23 ft. 5 in. length quoted for the post-war F-24. The revised version has a gross weight of 2542 lbs. as compared to 2550 lbs. per-war, and the height is 7 ft. 7½ in. as against 7 ft. 6 in. Oddly, there is only one important difference between the 175-hp Ranger-powered F-24 and the 195-hp, Warner-powered F-24: in either top speeds or cruising speeds. The Ranger-powered plane has 626-mi. range and the Warner engine plane the range up to 639 mi. For the color-conscious pilot—and this factor will be more important post-war than heretofore—the F-24 is offered in standard colors of maroon trimmed in buff, yellow trimmed in green, or red trimmed in gray. The Warner-powered version costs \$15,500 with the Ranger-powered plane selling for \$15,300 more.

FLYING IN BRITAIN—As of Jan. 1, British private fliers were permitted to resume private flying, which had been under government ban since 1938 because of military restrictions. The U. S. National Aeromarine Association, through its president, William Ensign, sent a cablegram of congratulations to Lord Beaverbrook of Titchfield, president of the Royal Aero Club of Great Britain, wishing the British private fliers "fair weather and unlimited ceiling." Serious-minded President Ensign probably didn't think of much, but he wished for the British fliers two things which are very much a premium in the United Kingdom.

Alexander McSorley



Dams of the Nation Create

"READY-MADE" Bases for Flight

They cut high in the millions, they are built for power, flood control or irrigation, but the mighty dams constructed to harness rivers form fine and "ready-made" airports for float flying. For the plane equipped with floats, they are ideal bases for sport or commercial flying.

These dams make vast landing sites

available to well-populated regions formerly lacking in all types of airports. They are open and accessible areas, and they offer thousands of new opportunities for flight schools, sales agencies or charter flights. New projects, to name other river systems, are now planned. More "ready-made" airports are in the making.



On this river system alone, the Tennessee Valley Authority has built 28 dams, behind the largest of which is Lake 114, 100 miles long, with 200 miles of navigable water. From the lake upstream to the ocean, other chains of dams offer new opportunities for flight with floats.

Edo *Master Float Makers*
AIRCRAFT CORPORATION 511 Second Avenue College Point, Long Island, NY

FINANCIAL

Airline Equities Now Selling At Many Times Book Values

Existing wide disparities will have tendency to narrow as industry becomes more seasoned; United has most conservative valuation, Colonial the most extreme.

Airlines equities are currently appealing at substantial premiums to book values. An AVIATION News analysis discloses that market prices range from 3½ to about 14 times indicated book valuations. Viewing airline market prices in relation to equity positions helps to place values in proper perspective and is frequently a reliable guide to reasonably sound investments.

Airline stock prices have been unusually strong and have been the most spectacular group in speaking the general market news of 1945 (AVIATION NEWS—Nov. 12, 1945). Going back over a longer period of time, air transport prices are up on an average of 150 percent from the December 31, 1942, level and represent a gain of almost 200 percent better than the general market has been able to attain.

Rising.—In this upward course of airline prices, little attention has been paid to basic asset position. Instead, emphasis has always been placed on future prospects—potential earnings. As a new industry, the air carriers were surrounded

with considerable speculative appeal and as long as growth prospects continued bright it mattered little if stable earnings on enormous high levels were slow in materializing.

For this reason, the existing wide disparities between market and book values have developed in air travel. As the industry becomes more seasoned, this spread will have a tendency to narrow. This is the pattern assumed in the market development of other new industries as they moved into solid, entrenched positions in the nation's economy.

The accompanying table presents the relative market and book value positions for each of the airlines.

It can be seen that United has the most conservative market valuation, although at only 2½ times its estimated book value.

In a large measure this is probably due to the fact that United has the largest assets which has minimized the market's concern about future earnings. It will also be noted that United has by far the largest book valuation among the carriers shown.

AIRLINE MARKET PRICES AND BOOK VALUES

Company	Common Shares Outstanding	Market Price	Total Market Value	Estimated Book Value	Ratio Book Value to Market Value
Allied	1,380,555	687	\$95,273,236	\$57,806,000	3.7
Braniff	1,800,000	34	\$51,000,000	\$5,000,000	5.5
Calif. Air.	1,000,000	34	\$34,000,000	\$1,000,000	34
Colonial	254,260	36	\$9,144,600	\$24,000	12.9
Continental	271,256	26	\$7,052,152	\$388,000	3.6
Delta	400,000	62	\$24,880,000	\$2,500,000	9.8
Douglas	348,000	124	\$43,296,000	\$18,000,000	2.4
Mid-Continent	306,296	18	\$5,508,192	\$1,000,000	5.5
National	306,000	29	\$8,860,000	\$2,000,000	4.5
Northwest	330,000	32	\$10,560,000	\$1,920,000	5.5
PAA	317,500	54	\$17,141,400	\$3,000,000	5.7
TWA	973,560	70	\$67,350,400	\$16,000,000	3.5
United	1,450,000	56	\$82,880,000	\$16,000,000	5.5
Western	550,239.7	38	\$20,969,094	\$3,000,000	7.2

Note:

* Assuming complete conversion of preferred stock.

**Offering subject to receipt of additional stock and assuming exercise by employment warrants to purchase a total of 30,839 shares of stock.

► **Highest.**—At the other extreme is Colonial Airlines selling at approximately 13½ times its book value. This company, incidentally has the smallest book value of all. The small number of shares outstanding in this instance has been believed to be primarily responsible for the high market price reached. In active markets, with little stock available, it is not uncommon for an issue in short supply to experience sharp runups. Certainly the earnings record of Colonial does not begin to support its present market levels. Current prices appear to place an extremely high premium on the earnings potentialities of no new issues not yet in operation.

While National and Delta have market-book value ratios of 7.8 and 7.0 times, respectively, it is possible to justify these relationships. Both carriers have been awarded major contracts which make their trunk lines. The growth prospects, therefore, for these enterprises is bound to be much greater than for most of the domestic airlines.

► **Comparison.**—It is interesting to note that Mid-Continent has a higher ratio than American—3.6 compared to 3.5. This again probably is due to the short supply of stock available. Further, even at current prices, Mid-Continent is selling lower than the indicated 4-1 trade with American. Is it possible that some doubt is now being expressed as to CAB approval of the proposed merger?

The relative market positions of the airlines frequently provides a helpful guide in evaluating companies.

► **Example.**—For example, Braniff and Northwest are estimated to have the same book values but the former is considered the higher market price. On the basis of past earnings and future growth prospects, some airline analysts would conclude that this relationship may be reversed in the future. Similarly, American and United have approximately the same market value although differing widely as to book values. This particular relationship has prevailed in recent years and it is believed may continue.

U. S.—Canadian Study

A joint committee to study easing of border restrictions has been set up by the U. S. and Canada. Specifically included are customs authorities relating to passage of aircraft across the border, entry of tourist aircraft and in-transit movements of foreign aircraft.

When History Repeats Itself....



Hannibal can sell his elephants to the zoo and FLY the Alps

The way they tell it, Hannibal had quite a time getting his army over the Alps back in 218 B.C. His family made it, drove a tough winter, strong elephants for traps and cargo transportation, and eventually worked down into the valley to give Scipio a good welcome. Next time, he better mind of months, he can fly his army over in fast dependable ships like the Lockheed Constellation.... and never need the pernicious pyramids.

New history in air travel and air trade is ready for the writing. An important factor in making planes of all types lighter and stronger is, has been and will be OSTICO Steel. Taking its name with engine mounts, strut assemblies, fairings frames and hydraulic systems. The 2000 which every major plane manufacturer places in this company is based on skill, experience and high quality standards which are traditionally OSTICO's... from the earliest days of tube making in America.

THE OHIO SEAMLESS TUBE COMPANY

BRANCHES: 20 M. Winter Street, Chicago, 1215 Calumet Ave., Cleveland, 2507 E. Grand Blvd., Detroit, 1025 Alton Rd., Cincinnati, 1070 W. 11th St., Indianapolis, 2225 2½ Ave., Toledo, 2728 E. Jones St., Hammond, 70 E. 4th St., New York, 122 S. Broad St., Philadelphia, 1220 N. Main St., St. Louis, 1511 South Twenty-third, 201 Federal Ave., Springfield, 404 Yale Suite 800 Bldg., Tulsa, 1216 Maryland St., Vancouver,



Plant and Main Office
SHELBY, OHIO

MANUFACTURERS OF STEAMLESS AND ELECTRIC-WELD STEEL TUBING

AVIATION NEWS • January 7, 1946

The Birdmen's Perch

By Major Al Williams, ALIAS, "TATTERED WING TIPS,"
Gulf Aviation Products Manager, Gulf Bldg., Pittsburgh 30, Pa.

REFINING INFLUENCE

Suppose you're doing engine-overhaul.

First, you take off the oil, get the engine off, and take off your shirt but you don't stop there. In fact, this is where you really begin. Because when you started with cleaning the engine — getting rid of any unnecessary parts — you just got it back together again.

The steps follow in refining Gulf-style oil are very much the same as those in an engine overhaul.

First, we get a top-quality grade. Then we take it apart — that is, take it apart balancing oil (and all in bp-bounds).

And right there is where Gulf's famous Alchlor Process really begins. For this

means as Patch Pilot (brought along) with I. "Doc."

Like this...

"No formation of American Air Forces planes has ever been named back from its objective by enemy action!"



That goes *Another* Kamegar, of Mas-
cane, Iowa, a concession.

And here's the kind of a deal we ex-
pect like AMM/C Robert L. Gray, Jr.,
VC 7, US8-Clearaway Bay CVL 75, sent
us "Fats" in the same letter — both
good ones. So he is hardly compressed
self, what's more, but only 3 "Fats" to
go for his promotion to Senior Patch
Pilot.

1. "The TRB is the longest, shaf-
fle-engine stick-slip-strike-in the world!"

2. "TRB's have been used for tor-
pedo-dropping, skip-bombing, skip-
dropping, rocket-launching, and just plain
soaring — and with one exception the
TRB holds the record for the
highest amount of money shipping
described."

How about X-hair? Here you are! Little
Kenne Poco!

Well — what are you waiting for? Get
some!

LITTLE KNOWN FACTS DEPT.

Another example, and still on qualifer
for our Senior Patch Pilot's concession:

The field's still wide open, and all it
takes is 5 "Fats" that we can use — with
proof! Meanwhile, you can refi'ge even-

FLUTTER'S DITTY BOX*

Said a star in the shot-o-sphere,
"It's cutting down crowded by hand.
First, the sockets goin',
And never — planes by the score!
Dressed with Gulf's G.A.G., so I hear!"

*If you can do better — DO... and send it to M.W.C.

Gulf Oil Corporation and Gulf
Refining Company, makers of

GULF
AVIATION
PRODUCTS

PRODUCTION

Industry Reported Disappointed By Work of Technical Missions

Participants reveal accomplishments were below expectations due to muddling and lack of careful coverage of German planes; majority of reports considered worthless.

Expecting a great mass of helpful information on German engineering, production and advanced aircraft models after the end of the war in Europe, the U. S. aircraft industry has learned much disappointed because the work of technical missions was badly muddled, it is now being said by participants in the investigations.

At least half a dozen different U. S. groups, plus some from the British, invaded Germany on the heels of the armies, seeking German scientific secrets. Some of the experts took their assignments seriously, but too many others, it is reported, treated the job like a tourist trap. The result is a few reports of excellence, but the great majority are worthless.

► **Missions** — Chief among the missions were THIC — Technical Industrial Intelligence Committee of the Foreign Economic Administration, NAVEC — Navy Technical Commission, the von Koenig group dispatched by Gen. Arnold, chief of AAP, USSTAF — United States Strategic Air Forces, NACA — National Advisory Committee for Aeronautics, USSBS — United States Strategic Bombing Survey, and two or three British groups.

These missions, according to participants, ranged from unscrupulous through Germany, descending one after another on the same plants. In some cases they found all engines and sets on a given plane of design and production had already been removed by a preceding mission. The German plant itself, some of whom were considered cooperative, were disorganized, and frequently expressed surprise that the Americans had been able to cover the war.

► **Vista Spotty** — Many of the air investigators packed out aircraft plants that had glorious reputations, such as Messerschmitt, which was overrun as by a swarm of locusts, and passed up others that were either out of the way, or unproduced.

X-ray Booklet Available

A booklet describing X-ray equipment used in industry for the detection of internal flaws in finished parts is being issued by the North American Philips Co., 100 East 42nd Street, New York City.

C-W Wind Tunnel Given to Cornell

The Curtiss-Wright Corp. has presented its \$4,000,000 research laboratory and wind tunnel at Buffalo to Cornell University for a research educational program cooperatively sponsored by a group of Eastern aircraft manufacturers. Although C-W has removed its activities to Columbus, Dr. C. G. Farms, its director of research, will remain at Buffalo to superintend work at the laboratory.

Guy W. Vaughan, president of the company, declaring the plan would permit wider use of the laboratory, said:

"We decided to conduct a considerable study in the field of aircraft friction factors at Buffalo, but as an armistice was declared, and became convinced that under present conditions their continued use by one company could not be justified."

► **Fast** — The three-year-old research laboratory contains modern research and testing devices, the most outstanding of which is the wind tunnel where models can be tested in air velocities approaching the speed of sound. A smaller tunnel gives velocities of supersonic speed.

The deed to the property has been given to Cornell, and the laboratory will be financed by eight big aircraft companies in the East which will contribute \$100,000 each. C-W is one of the companies.

Institute of Aeronautics Planned at Northwestern

Northwestern University is planning the establishment of a new Institute of Aeronautics for the purpose of conducting research on the fundamental problems of the aviation industry.

Dr. Franklin Elton Snyder, university president, said the new institute will require an ultimate endowment of \$10,000,000 and will be directed by Prof. C. D. Wilson. It will provide facilities for the development of aircraft materials, will encourage a pooling of all the educational resources of the school as plant, equipment and manpower for the purpose of developing a coordinated program of research, Dr. Snyder said.

University divisions participating in the work of the institute will include the technological institute, the school of commerce, the school of law, the medical school, and the college of liberal arts.

JANUARY, 1947

Conies the resolution!

Here's the *Forrest* line of completely
rounded All-Flavor Professional New
Year Resolutions. Just check each box,
use out this section of the Patch, and
post it beside the throne.

□ 1. I will not make steep turns at
low altitude.

□ 2. I will be kind to engines, windows,
and GAA frequencies.

□ 3. I will be kind to my engine — by
using Gulfgrade Oil.

□ 4. I will always submit posed with
my Little Known Facts About Well
Known Planes.

□ 5. I will use Gulf Aviation Goodline
so that my partners can "smile like a
pursuit plane."



AIA Veto of Export Advertising May Bring Even Stronger Drive

At least three firms now are discussing cooperative campaign likely to stress present and future products rather than purely wartime advances as was proposed.

Despite the rejection by the board of governors of the Aircraft Industries Association of a proposal for an industry-wide advertising campaign to stimulate export business, the industry's efforts in the export field are seen as likely to increase, with the Export-Import Bank's work, although separate, contributing powerful support.

AIA's veto at last recent Los Angeles meeting (AVIATION News, Dec. 17), rather than indicating indifference to the export market, especially paved the way for a stronger export campaign than the one contemplated. The original plan called for general advertising stressing the overall excellence of U. S. equipment on the strength of wartime performance. This was looked on with misgivings by some familiar with export trade who believed a better approach would be "selling" the products of the present and future, rather than that of the past. **New Proposal**—The essence that is what is now proposed to do.

AIA governors turned down the original plan for four main reasons. The strongest was that under such advertising campaigns, there would be a financing problem; consensus was that any advertising done by the industry should be on specific products, a project outside the ken of AIA; and some companies, those engaged in purely military work, quite naturally cannot be interested in the export field.

Now results in that advertising abroad will be undertaken either by individual companies or by several companies in a joint campaign. It is understood that at least three firms now are discussing such a cooperative effort with an advertising agency.

The emphasis in any such activity will be on types of products either in use or projected, and will be designed to meet efforts of foreign manufacturers, notably those of Great Britain, who are displaying great vigor in seeking export business.

Federal Assistance—Although the U. S. Government has never as actively promoted export sales as have some foreign governments, the aircraft industry is encouraged by the

activities and work of both the Export-Import Bank and the State Department, the latter through its civil air attachés abroad. The Bank officials say frankly that they regard the aiding of export sales of U. S. aircraft as one of their "most important activities," and there are indications that applications from foreign sources to use the Bank's funds for certain purchases here will generally be looked on with favor.

The Bank not long ago was authorized to lend up to \$3,336,000,000. Its procedure is not to make outright loans, but rather to extend lines of credit to foreign governments, foreign business houses, or U. S. companies operating abroad for the purchase of that kind of specific items or commodities. The borrower will obtain the Bank's approval for the purchase of each specific item. That is why the attitude of the Bank's officials toward aircraft purchases is considered a helpful sign.



AIRESEARCH CITATION:

One of four Southern California companies to receive such recognition, Airesearch Manufacturing Co. recently received from Army Air Forces a special Service Award for technical training given AFM mechanics in the use of high altitude equipment. Walter Brundage, Army research manager, received the award scroll from Brig. Gen. C. D. "Clegg" Vinson.

► 666 Customers—Among countries which have recently been extended lines of credit are Norway, Denmark, France, The Netherlands, and Belgium. Although the first essential of all of these is food and clothing, most of them were previous customers of the U. S. aviation industry, and their return is their former source of supply is expected in the mid-1940s distant future.

Before the war, industry sources state, U. S. aircraft, engine and accessories manufacturers constantly suffered from the lack of full information as to the size of the market abroad. This situation has been greatly improved by the appointment of the civil air attachés, most of whom are pilots and have a basic knowledge of aviation. The reports of these men repeatedly have been made available by the State Department to the industry and have given the industry a far broader and detailed knowledge of foreign markets than ever before.

CPA Authorizes ANMB To Detail Preference Ratings

The Civilian Production Administration has amended Directive 41 to shift CPA authority to authorize the Army and Navy Maintenance Board to issue instructions governing the assignment of preference ratings within limits prescribed by CPA priorities policy documents.

This applies to contracts, purchase orders and other procurement documents to the Department of the Army, Navy and Naval Advisory Committee on Accuracies and certain other government agencies.

ANMB also is authorized to rate deliveries on contracts to such procurement agencies and for command construction which includes military and naval airport projects.

Mach Meters Offered Wind Tunnel Operators

The Mach Meter originally designed for the Air Technical Services Command by Teller & Cooper, Inc., now is available for other operators of wind tunnels, the company announces. The instrument determines the compressibility factor in wind tunnel testing.

Computation of Mach numbers, which are the ratios of airplane speeds to speeds of sound at different altitudes, can be lengthy mathematical calculations. The Teller & Cooper meter eliminates this task in wind tunnel testing.



The '46 model has a real heat problem

GRANDMOTHER shivered with the kerosene stove going full blast. The newest, fastest jet propulsion aircraft burns the same familiar fuel—but what a difference in heat! The burning gases of jet propulsion range upward from 2000° F!

Handling these gases was a

problem for specialists in stainless steel—for specialists in heat and corrosion—for the specialists at Solar!

Now... the engineering and fabrication skills that produced exhaust systems for jet aircraft... are ready and waiting to tackle your problems. See Solar

for cost-cutting engineering and designing with high temperature alloys. See Solar for advanced forming techniques from deep drawing to precision casting. For quick action—write, wire or phone: Solar, San Diego 12, California. Factories in San Diego and Des Moines, Iowa.

SOLAR

Blend your tough problems in engineering and fabricating high temperature alloy products

New Model Helldiver Delivered To Navy

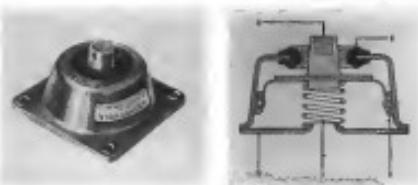
Another Curtiss Helldiver modification has been delivered to the Navy without public mention. It was an experimental model, the XSB2C-6, which never was mass produced.

The plane originally was intended to be an improved Helldiver, the plan being to convert it to a successor to the SB2C-5. Rapid development in dive and torpedo bombers, however, made it undesirable to place the "dash six" in the service type category, and it therefore was used experimentally to test cer-

tain new features of a subsequent design airplane.

Design — Two prototypes of the XSB2C-6 were produced, the first being delivered in May. Both had Pratt & Whitney engines and Curtiss constant-speed electric propellers. The second of the two planes had a special 18-ft. four-bladed propeller. The fuselage of the "dash six" was 20 in. longer than that of the earlier SB2C-5, and the landing gear was moved from 8 ft. in length to allow the extra-size propellers but took up no more rear deck space.

Metal-covered control surfaces and square-cut wing tips changed the familiar outline of the older Helldivers.



VIBRATIONLESS:

New Vibrocheck units, anti-vibration devices developed by Reliance Avionics, Inc., support the instrument panel on the right in the above photo, while that on the right is mounted on an older type of unit that results in a vibrating stand. The difference in clarity is the result of the Vibrocheck support which is claimed to absorb 85 percent of both lateral and vertical vibrations. Chief innovations in the new unit is the simplified metal spring, shown in the cutaway, which bears the principal load. The device is made in three sizes, to bear loads ranging from one-half pound to 45 lbs.

G. T. Waite Elected Chairman of NASC

Gordon T. Waite, engineering representative, Consolidated Vultee Aircraft Corp., has been elected national chairman of the National Aircraft Standards Committee.

The Aircraft Industries Association announced that Waite, former Air Corps officer and Navy engineer, will direct the aircraft industry's efforts to extend its program of standardizing aircraft equipment to facilitate the interchangeability of parts among varying aircraft types. A Consolidated Vultee engineer for the past eight years, Waite has specialized in aircraft standardization for that company.

Other Officials — The Eastern division of the NASC will be guided during the coming year by Chairman James F. Sherman, Standards Unit chief, Wrights division, Boeing L. J. Collins, Douglas Aircraft standards engineer, has been elected western chairman. T. P. Kearns, Ryan Aeromotors Corp., was named western vice-chairman and H. R. Leader, Bell Aircraft, eastern vice-chairman.

Salsbury Motors Taken Over By Northrop Aircraft

Northrop Aircraft has further diversified its aerospace business with the acquisition of Salsbury Motors, formerly Avista, Inc., of Los Angeles.

The acquisition gives Northrop a variety of Salsbury products including 4-hp air-cooled engine, a new automatic clutch and transmission, and a streamlined motor scooter. Due for early production is a package delivery car.

Heads of Salsbury are Edward W. Miller, Board Chairman, and Don I. Carroll, president and general manager. The acquisition will be effected by an exchange of stock.

Full Meeting Schedule Is Resumed by ASME

The American Society of Mechanical Engineers has announced resumption of its full schedule of national and regional meetings which was interrupted by the war.

The annual national meeting, sponsored by the power Aviation Division of the ASME, will be held at the University of California in Los Angeles, June 3-4. Dr. John E. Younger, of the University of Maryland, is secretary of the division.

The Navy's Newest "Homesick Angel"



World's first plane
with both a conventional
engine plus Jet Propulsion

High speed, mile-a-minute rate of climb, exceptional maneuverability and long crossing radius — the Ryan Fireball with its combination power plant is a top performer in every way. Here is the answer to the Navy's request for a fighter which could operate from carriers and yet outperforms the enemy at all altitudes.

And for added power in an emergency or on take-offs, the big Wright Cyclone engine is equipped with a water injection system using a

CECO water injection pump. This steps up the forward engine power from 1125 h.p. to 1350 h.p. — a real boost when it is needed most.

Chandler-Evans is particularly proud to have played a part in this newest addition to the great Navy team. For whether it concern planes for war or peace, Chandler-Evans' engineering skill and knowledge always stand ready to serve America's aviation industry as new developments enter the ever-changing picture in the air.

CARBURETORS FUEL PUMPS PROBE-PLUGS
CHANDLER-EVANS CORPORATION
WEST HARTFORD 1, CONNECTICUT, U. S. A.





If the "Age of Flight - 1950 Edition" - the centenial history of Aviation - were sold, within the same shell would appear immediately as a shelter by Aviation Fuel Development.

**Let historical facts be Your windsock
in the field of aviation fuel...**

PROOF of tomorrow's puddin' is in the eatin'-shot of that, it's in today's puddin' made by the same cook.

Yes, history repeats itself. Shell's many well-known "firsts" today in improving fuels and lubricants will be your best bet to tell prevailing winds over the field of aviation fuel tomorrow.

Look at the Shell record:

First to supply the Army with

100-octane fuel in commercial quantities.

First in U. S. to install and operate a commercial plant for Butane Isomerization, a process which made possible new increases in volume of 100-octane.

First to establish a commercial plant using sulphuric acid alkylation—a process which increased 100-octane

aviation fuel production tenfold.

You will find this brand of advanced thinking—backed by the full force of Shell Research facilities—reflected in the quality of AeroShell lubricating oils and greases, and Shell Aviation Fuel.



SPECIAL AIR SERVICES

CHARTER

NON-SCHEDULED

INTRASTATE

Michigan Central Airlines Seeks To Enter Interstate Operations

Peninsular state company finds largest demand there is for point-to-point transportation rather than for feedline service to nearest major airline terminal.

Founded on the premise that smaller communities must have access to major gateways, rather than to the nearest major airline connection, Michigan Central Airlines, Inc., with headquarters at Bishop Airport, Flint, Mich., is doing much to remove the state's handicap of being surrounded on three sides by water.

A pioneer intrastate carrier, Michigan Central has rounded out two years of operations with a route extending from Detroit to Cadillac, via such industrial centers as Flint, Saginaw, Bay City, Midland and Mt. Pleasant, with an extension beyond Cadillac to Traverse City during the summer months. In addition, two additional routes have been applied for and the application was heard as a part of the CAB Great Lakes Area hearing before CAB.

Plans.—The routes applied for, which would bring the line into the intrastate carrier category, call for Detroit-Detroit, operating on an air-mail schedule, according to company officials. The first route would extend from East St. Marie to Cincinnati, via Pontiac, Charlevoix, Traverse City, Ludington, Muskegon, Grand Rapids, Kalamazoo, South Bend, Kokomo and Indianapolis. The other route would originate at Tri-Cities Airport, serving Saginaw, Bay City and Midland, and would extend to Chicago via Flint, Lansing and Kalamazoo.

Growth.—With present fares averaging 53 cents per seat mile, business has grown enormously. Over a representative period from Oct. 13 to Dec. 14, 1965, 22 passengers were carried per ton, based on instant-miles per trip, divided into schedule-miles.

The fact that Michigan, owing to its unusual geography, is an "Air Rat" as far as surface carriers are concerned, has provided additional business on the firm's north-south run. From Detroit to Flint, a ground distance of 14 miles, the air time is 2 hrs. & 20 min. Michigan Central makes it in 1 hr. 50 min. The greater distance, requires no less than seven hours and 30 minutes by rail, while the airline's Cessna makes it in 35 minutes. For the entire route, Detroit to Cadillac, a distance of 217 ground miles, the

Kaiser Seeks C-54's

Benny J. Kanner's proposed San Francisco-New York air freight service may be expected to start by March 1.

Agents now in the Bay area service C-54 aircraft. It is recommended continuing C-54's. The company will be in a position to lower an artificially stabilized rate of approximately 35 cents per ton-mile (for C-45's) to close to 15 cents per ton-mile.

Original management of the Kaiser project was headed by Andrew M. Newell II, but Kaiser officials have not yet released any announcement of their plans.

trains take seven hours and 22 minutes.

Traffic Flow.—Ninety-five percent of the line's business is to or from Detroit. The average figure of 12 passengers per trip is remarkably high in view of this factor, since it means that if every plane leaves Detroit with four passengers, some of them embark before the end of the run. It is proof, too, of the fact that stop-and-start small airplane non-stop flights are required along a route of this sort.

Additional stops have been added from time to time, and, in conjunction with the Star Route mail contract with the Post Office Department, for service from Cadillac to Beaver Island during winter months, service was inaugurated into Charlevoix on Jan. 10, 1964. During the summer months this tourist resort was the source of an extremely heavy flow of traffic.

New Concept.—The experience of Michigan Central leads it to believe that growth of so-called feeder routes as an entirely new type of operation will be hindered by the concept of "circular" and "star-shaped" routes. The failure of one such feeder system in Michigan due to an age-old adage proved, Dorn said, that further limiting of such service is the no-stop stop limitation "imposes the same hardship upon smaller communities that it does on larger communities now served by larger carriers."

"It's our contention that short stops are often more time consuming than long stops," Dorn said. "In fact, long stops are more economical than short ones, because the aircraft can be used more effectively. We feel that the traffic potential of a given town is thoroughly exploited for the

benefit of the carriers as well as the public," Deet points out, illustrating with an occurrence of last summer, when it was found necessary to have every trip east of Detroit for a period of one week a non-stop to one town only, since, otherwise, each trip would have had a very low average load factor. Passengers, he states, were "well pleased" with the service.

"It sounds like a method of operation entirely feasible where stable traffic demands are well-known," he said.

Miami-Based Line Serves South America

A non-scheduled air express airline, Skycargo International Trading Transport Co., has flown more than 150,000 air miles and \$300,000 worth of drugs, mainly penicillin to the West Indies, Central and South America in six months of operations that began last July with a flight from Miami to Rio de Janeiro.

Currently operating only under contract basis with drug firms, the Miami-based line now expects within six months to offer express services to the public on a "pay per load" basis. Equipped with four Lockheed Lodestars, the line is operated by Robert J. Bergeron, once unacquainted in a flying school associate in Cleveland.

► **Plans**—"At present," Bergeron said, "we are making a survey flight down the west coast of South America in advance of extended operations that will carry express cargo to the West Indies and panama along both the east and west coast of South America. Although only drugs and medical supplies are now carried, future plans call for the hauling of all types of freight, including aircraft equipment and parts."

The line will remain only a cargo carrier and passenger operations are not planned, he said, adding that it will operate only south of Miami.

In his first attempt at airline operations since 1939 when he left the small flying school and charter service to join a maritime exporting firm, Bergeron hopes to add more planes to his airline as soon as he is able to purchase new cargo built planes.

► **Established**—With offices already established in Buenos Aires, Managua and Rio de Janeiro, the airline has arranged for representing agents in every principal city in Latin America to contract for exportable materials.

On return trips to the United States the Lodestar bring South American drugs.

The airline was formed in November 1944 to facilitate military contract transport operations in the Caribbean area, but by the time operations began war ended and the operations were extended to commercial contract cargo work to South America. The operations located at the southern extension of Miami's 36th Street international airport but will be moved to an ex-military all cargo airport being planned by Miami authorities.

► **Markets**—Bergeron recently returned from a two month South American trip to look up the air transportable export markets. "Latin markets are very favorable," he said, "especially for American built light planes. Latinas are very much inclined over our small planes for private operation," he said.

Aviation Gasoline Tax Proposed in Virginia

Revenues from a proposed 5-cent-a-gallon tax on aviation fuel would go to finance a state aviation program, according to the recommendations of the Virginia Aviation Legislative Council, reported last week.

The state now imposes a similar 5-cent tax on all gasoline but refunds 2 cents per gallon on aviation fuel.

Other proposals of the council called for creation of a seven-man committee, appointed by the Governor, to advise the state aviation division on problems and policies; legislation enabling local governments to acquire, singly or jointly, land and facilities for airports, and easements for flight over property adjacent to such airports; expanded aviation education in high schools.

JAC has a \$100,000 capitalization with 100 stockholders offering small size of operating losses at Ontario, Calif. Airport Immediate purchase of one surplus C-46B is planned, and members of the company hope to establish service to Honolulu in addition to continental shipments of perishables.

Directors and officers are J. Edwin Jones, president, former Conairway chief of flight operations,

Les Dorsey, vice-president, former Conairway captain, Don Larsen,

secretary, former Conairway station manager; Quentin Cudney,

George Messinger, C. G. Brown,

and Samson Baldwin, Jr.

Pan-Maryland to Use *Cruisairs*

Pan-Maryland Airways will use four-place Bellanca Cruisers in its intensive operations. President G. Bernard Fenwick has advised the Maryland Public Service Commission. The first plane scheduled to deliver February 18. Deliveries of other four-place Cruisers will be made as soon as fuel will allow in March and April.

Originally, Pan-Maryland had planned to use Taylorcraft Model 125. While the Bellancas are higher priced, their greater speed will make possible lower per-mile operating costs and offset the price

HYCON POWER UNIT

3000 P. S. I. CONTINUOUS DUTY



40" long, 17" wide, 28" high

**2.25 GPM 3000 P.S.I. Pump on Motor
10% OD Accumulator Mounted and Piped
on 20 Gal. Reservoirs. Micronic Filter**

A PACKAGED UNIT FOR ANY HYDRAULIC CIRCUIT

RECORD PRESSES • LABORATORY PRESSES • ARBOR
PRESSES • JACKS • MACHINE TOOLS • APPLICA-
TIONS REQUIRING LONG DWELL UNDER PRESSURE

EXPERIENCED HYDRAULIC ENGINEERS WILL CALL UPON REQUEST

THE NEW YORK AIR BRAKE COMPANY

Hydraulic Division



He built our cities

This Colossus, the American farmer, has made possible the building of our towering cities. If that sounds far-fetched, remember that when America was young, 9 out of 20 of our citizens were producing farms to raise the necessary foods and fibers. But our farmers have learned so efficient that agriculture today feeds only one-fifth of our workers. The others have been able to build our towns and cities and devote their labors to making America a land of luxury . . . a land of arts, sciences, education, building, industry, . . .

listing of a magazine. The result is that C. G. has won a unique affection with America's farm families . . . giving added weight and prestige to every article, story, feature—and advertisement—it carries.

Facts of Special Interest to the Aviation Industry:

Survey shows 95% of personal planes will be sold to residents of rural areas.

In Kansas 455 out of 16,000 farm families intend to buy planes against only 796 out of 12,000 city families. Bush planes—over 90% aircraft—purchaser and consumer 95% of all America produced.

Farmers' incomes have doubled in the last five years! Country Gentleman's readers are concentrated among the top-half farm families.

National Spokesman for Agriculture

A COUNTRY PUBLICATION

AVIATION NEWS • January 7, 1946

PERSONNEL

AOS Traffic Department

Headed by J. S. Robbins

J. Stetson Robbins has been named vice-president in charge of traffic of American Overseas Airlines. Robbins served as special assistant to Nelson Rockefeller, Coordinator of Inter-American Affairs during the war and has been with the agency since 1941.

He formerly Europe on Wheels, Inc., to build the drive-yourself system in Europe before the war. He was director of the educational travel department of the Grey Line from 1938 to 1942.

Peter J. McDonald (photo), original director of public relations of American Airlines, has resigned to become associate director of public relations of Abbott Kinney Co., Los Angeles, advertising agency. McDonald has served in the traffic, operations, technical, and public relations departments of Eastern Airlines, Pan American Airways and American Airlines. He was appointed to Thomas J. Duggan's recently merged vice-president of the agency.

Alyn Saugle (left) has been named advertising assistant to PCA president C. G. Moore. Moore, who previously has been executive to Moore for past seven years, Mart L. Fester (right) becomes coordinator of trans-

portation and public relations manager for United Air Lines at the Chicago headquarters after having spent two years as an air combat intelligence officer with the Navy. Johnstone began his aviation career in Seattle with the Boeing Airplane Co., and moved to Chicago in 1942 when the Boeing System and other companies were formed into United Air Lines.

Walter H. "Bob" Neff, who was in Pan American Airways' public relations department for 10 years, has returned to the company as public relations manager of the Atlantic division. Neff recently was head of the aviation section of the Navy's public relations. While still with Pan Am, he was loaned for a short period to the Air Transport Association for public relations and advertising programs. Charles D. Pippenger, who has been appointed western operations superintendent of Pan Am's Latin American Division. He has been with the airline since 1935.

Bonnie Airways has appointed the following personnel: appointments: Maj. Alvin Aldridge, AAF service, has been assigned district traffic manager in Memphis; replacing E. G. Favotti, who has been transferred to

ing for PCA and Charles DeWitt, personnel analyst in the department of personnel administration. Fawcett was formerly with Carnegie-Mellon Steel Co., while DeWitt was staff assistant to the personnel director of Glenn L. Martin Co.

Bonnie Airways has appointed the following personnel: appointments: Maj. Alvin Aldridge, AAF service, has been assigned district traffic manager in Memphis; replacing E. G. Favotti, who has been transferred to

this as district traffic manager. Major Douglas Wood, Dallas district traffic manager for five years before joining the ATA, has returned to his former position.

John B. Werner, who started with Douglas Aircraft Co. over 20 years ago and became plant manager of the Chicago factory, has resigned to enter private business in the manufacture of tool machinery. He has been technical manager to Douglas since 1944. Prior to taking over the Chicago plant, Werner was in charge of the Oklahoma City plant.

M. G. Tuttle, former director of industrial relations for Consolidated Vultee Aircraft Corp. at San Diego, has been appointed president and chairman of the Southern California Aircraft Industry group. He has resigned from Convair to accept his new position. Tuttle was director of industrial relations for Vultee Aircraft, Inc., from 1938 until the merger when he was transferred to San Diego.

Robert E. Johnson (photo) has returned to his post as director of advertising and publicity for United Air Lines at the Chicago headquarters after having spent two years as an air combat intelligence officer with the Navy. Johnstone began his aviation career in Seattle with the Boeing Airplane Co., and moved to Chicago in 1942 when the Boeing System and other companies were formed into United Air Lines.

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Billy C. Neagle, recently released from the Army Air Forces, has been appointed vice-president of maintenance at Houston-Pearl Airport, the Indianapolis, Ind., base of Peake Aircraft Sales & Services, Inc. Before re-



PCA EXECUTIVE:

James M. Cornichon (left) was recently elected executive vice-president of PCA. A widely known executive, he has been vice-president in charge of operations. He has been with PCA since the merger of Central Airlines into PCA.

James H. Neagle (right) was president of the Neagle Aircraft Corp. of Laurel, Pa., a lightplane manufacturing concern.

Transcontinental and Western Air, successors appointment of Walter Brown, Jr., as director of passenger traffic of the international division. He has been with the American President Lines since 1938. Peter H. Esposito, formerly director of sales of TWA, has been granted a leave of absence to serve as operations manager for Silla, Swedish airline. He will make headquarters in Stockholm.

George S. Stark, assistant general sales manager of the Basye Greenwade Co., has been appointed manager of the New York office, succeeding Frank H. Willis, who has resigned as vice-president and general sales manager. Formerly with Ludlum Steel, Stark joined Ford Instrument Co., a division of Basye. In 1941 as procurement manager. He has been named assistant manager also.

Mac Thompson (photo) has joined the Walter Dorwin Teague Co. industrial design group to advise on aircraft terminal facilities and as consultant to communities and other planning experts. Thompson was formerly chief of building design service of the Civil Aeronautics Administration and wrote the manual "Airport Buildings" which will be published soon.

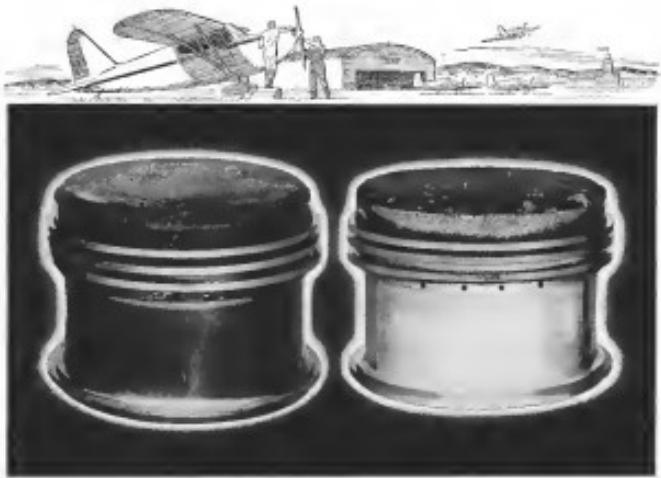


COUNTRY GENTLEMAN

AVIATION NEWS • January 7, 1946

AVIATION NEWS • January 7, 1946

REGISTRATION NO. 20



Which piston was used longer?

If you guessed the one on the left, try again.

Actually, the clearer of the two pistons was in use twice as long as the carbon-coated one. The difference was simply that the carbon-coated piston came from a test engine lubricated with a straight, high-quality mineral oil.

The clear piston came from an engine lubricated with Standard of California's IMPROVED RPM Compounded Aviation Oil.

RPM Aviation Oil contains a detergent (which means cleaning agent) that "washes" carbon, gum and varnish deposits off pistons...keeps them clean. Another non-porous mineral oil clinging to hot spots that otherwise oils leave bare...another prevents foaming, assures better lubrication...still another is an oxidation inhibitor.

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STANDARD OF CALIFORNIA

TRANSPORT

CAB Approval of IATA Agreement Looked for Before Tomorrow

Government circles expect favorable decision by then, pointing out carriers need to enter North Atlantic meeting sure of their legal grounds.

Official quarters expected last week that a Civil Aeronautics Board decision on approval of the International Air Transport Association agreement on traffic conferences would be announced by tomorrow, the date the North Atlantic conference is scheduled to meet.

The traffic conference agreement, framed at Montreal in October, was filed with the Board by American carriers desiring to participate in these regional groups, which will consider rates and other matters of interest to the airlines. CAB must approve all carrier agreements.

Deadlock.—The Board reportedly was deadlocked for several days on the matter of approval, two members for and two against. But officials elsewhere in Government were confident that a decision would be reached shortly. They agreed that it would be unsafe for the carriers to be allowed to go into the North Atlantic meeting ignorant of whether the Board considered their action legal.

It was known that a decision to disapprove the IATA agreement would be considered a severe setback for the State Department, which feels that the carriers themselves should commit and agree on rates.

Attitude.—The State Department reportedly feels its hand would be strengthened greatly in bilateral negotiations for civil aviation agreements if it could point to CAB approval of the IATA agreement as evidence that this government desires as much as any to even rates.

Lack of such assurance, according to some authorities, causes the French government to hesitate in framing a formal air accord with the United States.

Interest.—The French, meanwhile, have joined in an interim arrangement to expand the services provided for in the bilateral agreement of 1938 under which Pan American Airways flew two weekly flights to Maracay.

The interim measure provides that the French government will "consider favorably" American requests for additional flights on the grounds that reciprocal benefits will be granted France. American officials said such requests will be made when Transcontinental & Western Air and Pan American decide the number of trips they would like to operate. France accepts the Fifth Freedom of the air, which she opposed at the Chicago conference, and thereby grants TWA the right to pick up traffic in France and carry it to or through countries. In reverting her position, France drew away from Britain, whom she supported originally at the Chicago conference.

U.S. Routes.—The arrangement, to be in effect until a formal agreement is concluded, "permits" procedures for two U.S. routes and two French. The U.S. routes are those certified by the CAB to TWA and Pan American in the North Atlantic. Details of whether the Board considered their action legal.

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Colonial Application

Colonial Airlines, an organization recently allied with CAB, is seeking designation as the major airline to operate the New York or Boston-Quebec route authorized under the existing transport agreement with Canada.

Greeting of this application, together with a New York-Boston-Pt. au Laton extension sought in the Middle Atlantic case, Colonial would seek similar status to offer Washington-Quebec service via alternate routings.

route.—The French obtain rights to use route across the North Atlantic to New York and Washington and to Montreal and Chicago.

Announcement that bilateral air agreements had been effected with Czechoslovakia and Turkey was expected from the State Department over the weekend.

Transair Order.—Another official act affecting international air transport last week was President Truman's order shifting control of airports and facilities in India to the War Department, so the Civil Aeronautics Administration, CAB, obtained control of all facilities necessary to the operation of civil aircraft of the United States in international air commerce at Teheran, Abadan and Jask, Iran.

CAB sources said this action fol-



AMERICAN OVERSEAS AIRLINE EXECUTIVES:

These five officials of American Overseas Airlines, returning recently from business trip to Europe, (left to right) James G. Flynn, vice-president—operations; Summer Sewall, president; Leatrude Brown, European Director, were met by Harold R. Marr, vice-president and general manager; Terrell V. Dysktra, vice-president; John E. Stater, chairman of the board, and J. Stanley Robbins, vice-president—traffic. Flynn had been on a series of goodwill installations overseas. Sewall was in Europe to make arrangements with foreign governments and effect organizations along the AOA's routes.



PORUGUESE GET BRITISH PLANES

In what was described as Britain's first export post-war commercial planes, three de Havilland Dragon Rapides and one Percival Proctor recently were sold to Compania de Transportes Aereos (CTA), privately-financed Portuguese firm with headquarters at Lisbon airport.

The planes are shown in flight to Lisbon. De Havilland says the Dragon Rapide, while of pre-war design, is the most economical transport available for light and variable traffic. CTA will open its first route between Lisbon and Oporto, carrying passengers, freight and mail.

lawned departure of American forces from Iran and that the CAA would

operate the bases pending future disposition either through direct negotiations with Iran or through proposals of the Provisional International Civil Aviation Organization.

On another front, it was announced that the recent British White Paper on civil aviation, containing little information in addition to that already announced, will be debated in Commons, January 24, on Government motion for ap-

proval.

TWA Seeks to Break Ocean Pay Deadlock

After pilots so far as average monthly figure pending retroactive settlement of controversy with ALPA.

By MERLIN MICKEL

Transcontinental & Western Air has asked its pilots to fly its international routes at a salary equal to their average monthly pay for the last year plus \$1,000, making it a salary increasing that has blocked its international operation. The carrier, one of three compensated to fly the Atlantic, has stood by with the Canadian and DC-4's grounded while differences over pay may have stymied an agreement with the Air Line Pilots

average monthly salary for the last six months. When pay for the operation finally has been decided on, adjustments will be made retroactive. **BUICKSON LICENSED**—The license negotiations have not involved arrangements to be paid for flying the Constellation. Compensation not having been submitted, wait no request will be in their review.

TWA has received eight of them, and expects several more before the month is out. Since it was the first line to order the Constellation, it deserves to use them as inaugurating scheduled flights to Paris, to which one flew last week as a proving flight. It also has C-47's, however, and presumably would start its ocean service with them if a pilot agreement for their operation is worked out before one is reached on the Constellations.

North Atlantic Routes Assailed by Trippé

Pan American Airways contended last week that CAR had failed to apply its area concept of international routes and thereby relegated PAA to a "still more uncompetitive position" with other U. S. and foreign flag carriers.

Demands—Demands for pilot salaries in excess of those paid by either Pan American or American have been made of TWA by ALPA and discussed at length by the airline and the association. The National Mediation Board has been asked to help find a solution.

Senior pilot members of the organization receive \$1,000 monthly from Pan American and \$1,075 from American Overseas Airlines for flying DC-4's. Both have been operating internationally for some time. Pan American flew during the war as did American Export, which was acquired by American Airlines and became American Overseas.

Offer—TWA has been confronted with a new operation and necessarily therefore for negotiating a new contract. Last fall it offered senior first pilots \$1,000 a month to fly on its International Division. ALPA countered with a request for increases in base for DC-4 piloting on the division, and asked shorter hours and a bonus on mileage. These requests would bring the monthly pay for an eight-year first pilot flying 75 hours, evenly divided between day and night operation, to \$1,342.50 a month.

John C. Leslie, vice president of PAA's Atlantic Division, named lack of "flexibility" in PAA's contract, which he said awarded the least attractive route from a tourist standpoint.

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Denver Wants to Use Modification Center

Denver, Colo., seeking to enhance its position as an aviation center, has requested the government to transfer to the city the \$1,666,000 worth of buildings and facilities at the modification center built at Municipal (Begoleos) Airport with government funds on city-owned land, and operated during the war by Continental Air Lines.

This request follows the pattern under which the city of Cheyenne, Wyo., recently acquired the modification facilities there for \$1 a year with the understanding that the Government may use the buildings and that they will be turned back to the Army in case of emergency.

Need Help—Mayor Stapleton of Denver told RJC, owner of the facilities, that the Denver municipal buildings now are taxed to the limit and new rounds must start at 10% of the original value. The tax increase and that no new construction

can be expected for at least a year because of difficulty in obtaining materials, etc. The facilities cover 89,4 acres and include a large concrete apron, two hangars, and six other buildings.

Meanwhile, the city and the Chamber of Commerce have united in support of a new and enlarged AVIATION development program, based on opportunity to compete air lines but calling for teamwork with other cities and states with what should the aviation resources of the general region might best be developed.

Program—Denver's program calls for one-carrier service. Between New York City, Chicago, Denver and Los Angeles (these have contrasted thus as intense support of United Air Lines in its battle with Western Air Lines for the coveted direct Los Angeles-Denver "over the hump" route which Western intends to open in January.)

Between Denver, Kansas City and St. Louis (Continental now goes between Denver and Kansas City), looking ultimately to one-carrier service between San Francisco, Denver, St. Louis and New York. From the tropics to Alaska and South east (proposed "Sunshine Air Route" (Aviation News, April 16, 1948), which enters Canada through Lethbridge.

Between New Orleans, Oklahoma City and Denver.

Between Atlanta and Denver.

Minneapolis and Denver, Phoenix and Denver, Chicago and Denver via Kansas City, and others.

To further its program, Denver city authorities have moved to acquire land southeast of the city for a new private plane and charter service terminal. This has been delayed by a series of law-suits resulting in condemnation awards for part of the needed land which Denver City authorities say are far above its value. However, the city now has more than 400 acres, and may go ahead with this though it hoped originally to acquire about 1,300.

Bonds Refunded—As a second step, Denver has refunded, at a nominal, bonds issued to construct facilities for air mail, and the Denver Air Mail with the consent of the carriers. The money saved, about \$21,000 yearly, will go into Denver's "kitty" for ultimate construction of a modern terminal building at the airport.

Baltimore Budget Cut Seen Threat to Airport

Possibility that Baltimore Municipal Airport may have to close for part of next year was seen in a City Council slash of nearly \$4 million in the Baltimore Aviation Commission's budget for the airport. The figure was trimmed from \$224,340 to \$181,193.

Robert O. Neumann, Commission chairman, and the cut—roughly \$77,300 from the appropriation for labor and \$30,000 from the maintenance fund—had both pointed

attention to the point that service operations could be adequate throughout the year or it will be necessary to close for a portion of the year.

Revenue—He forecast that the reduction would increase the rate of deterioration of airport facilities and erode the base of substantial revenues which would accrue to the city from its efficient operation.

PAA Bermuda Service

An interim agreement between the U.S. and Britain for use of Kindley Field, ATC-built land base at Bermuda, last week permitted inauguration of Pan American Airways' way of airplane service to that island.

First DC-4 flight was made Thursday, after British Overseas Airways had enjoyed a week's monopoly of Bermuda-U.S. traffic as its Boeing flying boats Pan American coastwise operation with the same type of equipment Dec. 27.

Lack of Foresight Laid to AAA, Airlines

Misused opportunity to show feasibility by failure to meet existing post-war travel demands.

By BLAINE STUBBLEFIELD

Both the Air Forces and the airlines missed an opportunity to demonstrate the capacity and feasibility of aviation when they did not anticipate and provide against the post-war demand for air transport. That opinion is held by many persons connected with the present effort to carry air commerce home.

The Army is being accused in some quarters of failing to recognize the need for airmail contracts and better conditions, and of passing that risk to the airlines through GDT Order 56, which mandates 70 percent of airmail eastbound from the west coast, and through its Transcon contract. This time the Air Forces say they are not equipped or trained to fly on CAA air routes. The other time, after cancellation of the air mail contract, they willingly used it.

Expense—The Air Forces say they lost so many pilots and mechanics by discharge that they were unable to operate cargo transport services. But their critics say that the Army, including AAAF, yielded too easily to public and Congressional clamor for release of personnel, many of whom now wish they were back in the service.

Airlines operators likewise seized their big opportunity, in the opinion of critics, as not grabbing back airfares as C-46s, C-54s, and C-64s, immediately after V-J Day and becoming them through the emergency. In as doing they

would have given an effective demonstration of their potentialities and their feasibility, which would have gone far in selling both commercial and military air transport to the public.

Mailroads—As it is, the railroads are hauling the bulk of servicemen and the post-war flood of goods and travel, while the airlines turn away customers to comply with Order 56 and to carry on contract operations which nobody knows about. Conair, under the 70 percent order, is carrying about 4,700 passengers per week, while Transcon flies about 3,000—all told an inconsequential portion of the total being moved.

It is admitted that the airlines were overextended, preoccupation of surplus planes by means of backlog sales to the Army, plus conversion with RCAF over heavy losses on conversion allowances, and leases we purchase terms. But carriers contend that if operators had made up their minds to take the plunge and had gone after the pipelines with determination, they now would have had a large volume of equipment operating at near capacity, with profit both in money and in institutional advertising.

ODOT Stand—There is not much criticism of the actions on their truck operations with equipment at hand. GDT accepted the airline technical committee's report that a certain amount could be done, immediately. The airlines said that, with three months to train air and ground crews, and for maximum conversion of airplanes, they would gradually expand their truck deployment eventually. But ODOT figured it would be easier off-road loading by that time, and still feels it was right. The pre-Christmas rush will result in a large decrease in road disposals in the new year.



OUT OF CIRCULATION:

This Coast Aeromarine Administration utility plane terminated a long career recently at CAA's experimental station at Indianapolis, where it will be broken up into parts. During NC 12, a few thousand of hours with all types of cargo. Nearly 20 years old, she was formerly fleet for United Airlines, PAA, and the Celeste Corp.



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PAA Latin American Discount Cut Barred

Pan American Airways System, attempting to reduce from 25 to 15 percent the discount available to U.S. and foreign government travelers in overseas and domestic air transportation over its Latin American routes, has been handed a prohibitive order by CAB.

Specifically, the order:

• Permanently bars PAA and conceals the revised tariff as it applies to overseas air transportation in Latin American operations;

• Requires within 30 days from Dec. 27 and on not less than four days notice, alteration of the tariff—preferably as upward revision to 25 percent—as applicable to domestic air transportation in order to correct "unjust and unlawful discrimination" between the two distant effective discount rates;

• Sets Jan. 31 as deadline for discontinuance of PAA's 15 percent discount for foreign air transportation over Latin American routes;

• Increases the case with respect to tariff of Pan American, Cuban, Mexican, Central American and Caribbean Airlines, S.A.

The Board's own results from an investigation ordered last June 25 to determine the "lawfulness of the . . . revised rates under as they affect the rates, fares and charges of the . . . carriers." Simultaneously, the Board suspended, for 90 days, the new tariff, to take effect July 1, as applicable to overseas air transportation only. Protests against increases in rates resulting from reduction of the discount had been filed by the National Office of Price Administration and the Panama Canal Zone Central Labor Union and Metal Trades Council of the Panama Canal Zone. OPA contend that such increases were "inconsistent with the stabilization program."

Sustained—The Board now has so found. In addition, CAB states that the record shows no need for the additional revenue resultant from the reduced discount to enable PAA "under honest, economical, and efficient management, to provide adequate and efficient air carrier services."

Crashed Plane Salvaged

An Eastern Air Lines plane which overthrew in La Guardia field runway and crashed into Flushing Bay has been taken from the water and placed in the carrier's hangar. One person was killed and 11 injured in the accident, which occurred the night of Dec. 18.

Photographs of the plane, which went through a locator glide path installation at the end of the runway, were taken after cranes pulled it out of the bay.

RAF Quits Heathrow

With one runway completed, London's Heathrow airport, which will be Britain's main air terminal, has been turned over by the Royal Air Force to the Civil Aviation Ministry. The field is about 15 miles from London.

Main runway is 9,000 ft long. Another 8,000-ft runway is near completion, and a third, also 8,000 ft, is about 35 percent finished. Control towers are built but not equipped. Total cost of the 1,500-acre airport is expected to be in the neighborhood of \$100,000,000.

SHORTRUNES

• **Braniff** expects to put converted C-54s into service March 1. The first now carries 17 DC-3s, five of which came back from the Army last year, two C-45s used as freighters, and five C-46s being converted. New aircraft will be delivered 1945, totaling 350,000, a 56 percent increase over 1944. Revenue passenger miles were up 8.2 percent and revenue miles 54 percent. • Braniff employs numbered 1,800 at the end of the year. Half again as many as at the beginning.

• Chicago & Southern's work-week dropped from 48 hours to 44 since the start of the year . . . The carrier reports these increases for 1945 over 1944. Revenue passenger miles, 11 percent, revenue passengers up 10 percent.

• **Delta**, which established an average weight estimate of 365 lbs per passenger, to save time, and has stopped using individual weight bags, Brantley still is weighed . . . Gains showed for 1945 over 1944: revenue passenger miles, 18 percent; number of passengers, 16 percent; expense pounds, 10 percent; and revenue per passenger, 10 percent.

• During the year ended Nov. 30, 1944, number of employees more than doubled. Number of employees rose to 1,800 during the year, to 1,850. Six C-45s are being converted for Delta and a seventh has been purchased. First is expected to go into service about March 1.

• **Eastern** flew more than 2,600,000 passengers in November, 41 percent more than the same month in 1944. Revenue passengers and passenger miles were up 35 percent, with passenger revenue 27 percent above November, 1944.

• **Mid-Continent** reports a net income for 1944, after taxes, the \$80,014 compared to a loss of \$630 in November, 1944. Revenue passengers were up 18 percent and operating revenue increased 36 percent over November, 1944.

• **Pan American** affiliate on Colombia—Caribbean Northeastern de Colombia—expects delivery this year of three C-45s for use on proposed Bogota-Medellin and Bogota-Bahia routes. Avianca says it would be the first four-engine commercial operation in South America.

• Captain Robert W. A. Patterson has been named member of the Am Transport Committee of the International Chamber of Commerce, Inc.

Parker on Leave

Henry S. Parker, Jr., senior vice-president of National Airlines, started a six months leave of absence Jan. 1 because of his health. He will remain in Florida.

CAB SCHEDULE

Jan. 7: Exchange of exhibits by Standard Oil Co. of New Jersey and Esso Standard Oil Co. with New York on oil tax. (Dec. 22)

Jan. 10: Argument in New England case. (Dec. 23)

Jan. 16: Hearing in American Airlines case. (Dec. 23)

Jan. 17: Exchange of exhibits by Pan American Airways Inc. and Pan American World Airways Inc. (Dec. 23)

Jan. 18: Exchange of exhibits in Cuban-Caribbean Northeastern de Colombia case. (Dec. 23)

Jan. 19: Exchange of exhibits in Cuban-Caribbean Northeastern de Colombia case. (Dec. 23)

Jan. 20: Exchange of exhibits in Cuban-Caribbean Northeastern de Colombia case. (Dec. 23)

Jan. 21: Exchange of exhibits in Cuban-Caribbean Northeastern de Colombia case. (Dec. 23)

Feb. 10: Hearing in Eastern Caribbean Northeastern de Colombia case. (Dec. 23)

Feb. 11: Exchange of exhibits in Cuban-Caribbean Northeastern de Colombia case. (Dec. 23)

Feb. 12: Exchange of exhibits in Cuban-Caribbean Northeastern de Colombia case. (Dec. 23)

Feb. 13: Exchange of exhibits in Cuban-Caribbean Northeastern de Colombia case. (Dec. 23)

Feb. 14: Hearing at Arizona Airways case. (Dec. 23)

Feb. 15: Exchange of exhibits by Eastern Caribbean Northeastern de Colombia case. (Dec. 23)

Feb. 16: Hearing in Eastern Caribbean Northeastern de Colombia case. (Dec. 23)

Feb. 17: Exchange of exhibits in Cuban-Caribbean Northeastern de Colombia case. (Dec. 23)

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State and Federal Regulation

THE NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS, which at one time appeared ready to compromise its contention that the states should have full right to regulate all intrastate commerce within their borders, whether on an interstate carrier or a segment of an interstate route, has reaffirmed and strengthened its original stand.

Nevertheless, the airlines are confident that as the year starts they are closer than ever to their goal of exclusive Federal control of common air carriers in interstate commerce.

Little known is the fact that the executive committee of the Commissioners' association last March adopted a resolution favoring legislation reserving to the states exclusive economic regulation of intrastate air carriers only, "leaving to exclusive Federal regulation all other air carriage."

Subsequent developments in Congress led to reconsideration, and the committee last July voted in favor of a return by the Association to its earlier position.

This was done at an Association meeting last month at Miami, through expression of "unshakable opposition" to any Federal legislation destroying or interfering with state rights to regulate "rates and services of air carriers operating in intrastate commerce."

In what is regarded in aviation circles as a new move the organization voted in favor of legislation "to preserve to the states the right to provide economic regulation of local air commerce."

The Commissioners also directed their committee on legislation to continue its study of uniform state legislation providing for economic regulation of intrastate air commerce.

The committee does not consider as a setback the fact that the uniform state regulatory bill passed in only three states last year, with exemptions of interstate air carriers in each.

And with only a few legislators concurring this year, the airlines can have no doubt that the Association will press to the limit for action in the states in 1943. The railroads' entire legislative history shows that such is their method.

Air Transportation's New Era

TO PENNSYLVANIA-CENTRAL AIRLINES goes the distinction of starting commercial air transportation's new era, in which four-engine equipment will largely supplant twin-engine on long-haul domestic routes. Foreword to this chapter was written by Transcontinental and Western Air's Stratoliner, but PCA on January 15 will place in service the first fully converted C-54 of a large number to be flying the nation's airways on most lines before the year is out.

The first plane, due for delivery by the Glenn L. Martin Co. today, will go into regular service on the Norfolk-Washington-Chicago flight after a checkover in the airline's maintenance shop and "courtesy hops" at Washington, Pittsburgh, Cleveland and Chicago, and possibly New York and Detroit. PCA expects it to shorten flight

time between Chicago and Washington from the present four hours and twenty minutes to three hours and twenty-five minutes.

Other lines will follow closely. Next Martin-converted C-54 probably will go either to TWA or Eastern Air Lines. Fourteen carriers have conventional orders at the Martin plant, where the delivery schedule is to reach one a day by the end of this month. Martin officials estimate that the company has enough conversion business to last through the year.

This airliner program, augmented by similar though not as extensive work at Douglas and Republic, will speed the day when the public will find four-engine air travel the rule, rather than the exception, on long distance routes in, as well as out of the country.

A rugged performer with a big voice and keen ear!



Collins AN/ARC-2 Autostore transmitter/receiver

Remote Control Box

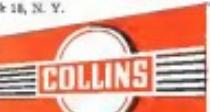
The AN/ARC-2 Autostore transmitter receiver was designed and is built by Collins for two place and larger military aircraft. It is an example of the experience, design ingenuity and manufacturing skill also available, in the Collins organization, to commercial users of communication equipment.

Transmitter, receiver and dynometer are all contained in the same case. The weight and space requirement of the AN/ARC-3 is considerably less than that of the equipment it replaces. Any one of eight tuned channels is immediately and automatically available by means of the Collins Autostore, operated either at the main panel or by remote control. The transmitter and receiver operate on the same frequency and are tuned simultaneously by a single set of controls.

This equipment, including its Autostore mechanism, functions reliably at all temperatures from -55° to +140° F., all altitudes from sea level to 40,000 feet, and all conditions of humidity up to saturation.

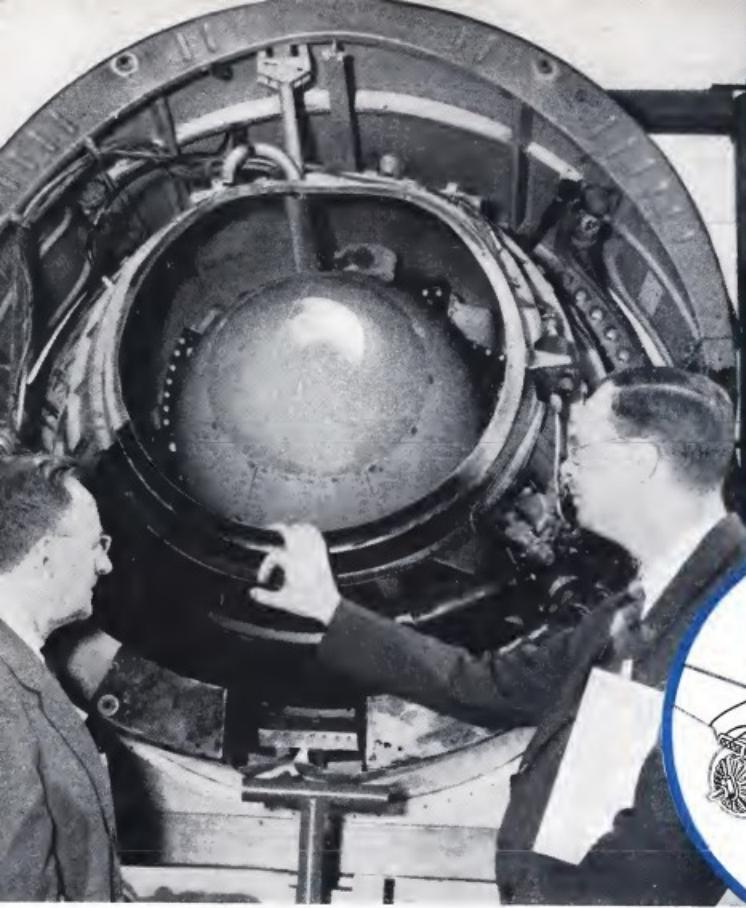
The Collins organization specializes in fulfilling exacting requirements. We will welcome an opportunity to make recommendations regarding your needs in the field of radio communication equipment.

Collins Radio Company, Cedar Rapids, Iowa
11 West 42nd Street, New York 18, N. Y.



COLLINS

IN RADIO COMMUNICATIONS, IF'S . . .



POWER Plus - - - ON THE FIREBALL



PRECISION PRODUCTS
AND
ENGINEERED SYSTEMS
FOR AIRCRAFT

—and double trouble for an opponent! The Navy Fireball has two engines—one a conventional reciprocating engine, the other a G-E gas turbine. Here, R. G. Standerwick and D. F. Warner, G-E engineers in charge of the development of this turbine, the I-16, are inspecting a mockup of it. As can be seen in the diagram, the turbine is located behind the pilot, and receives air through ducts in the leading edges of the wings. It uses the same fuel as the reciprocating engine. This combination of engines means greater maneuverability, greater climbing speeds, and a greater margin of safety in combat—it's a real balance of power.

Gas-turbine research and development, for which General Electric is especially well fitted, are being continued now, looking to applications on commercial aircraft. The Fireball installation marks a step forward in the trend toward planes with a combination jet and propeller drive. At G-E flight-test headquarters work is being done on several types of aircraft gas turbines, and any information we can give you about this equipment is available to you at any time.

Apparatus Department, General Electric Company, Schenectady 5, N. Y.

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